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FEDERATION OF MALAYA

REPORT
OF THE
MEDICAL DEPARTMENT
FOR THE YEAR

1950

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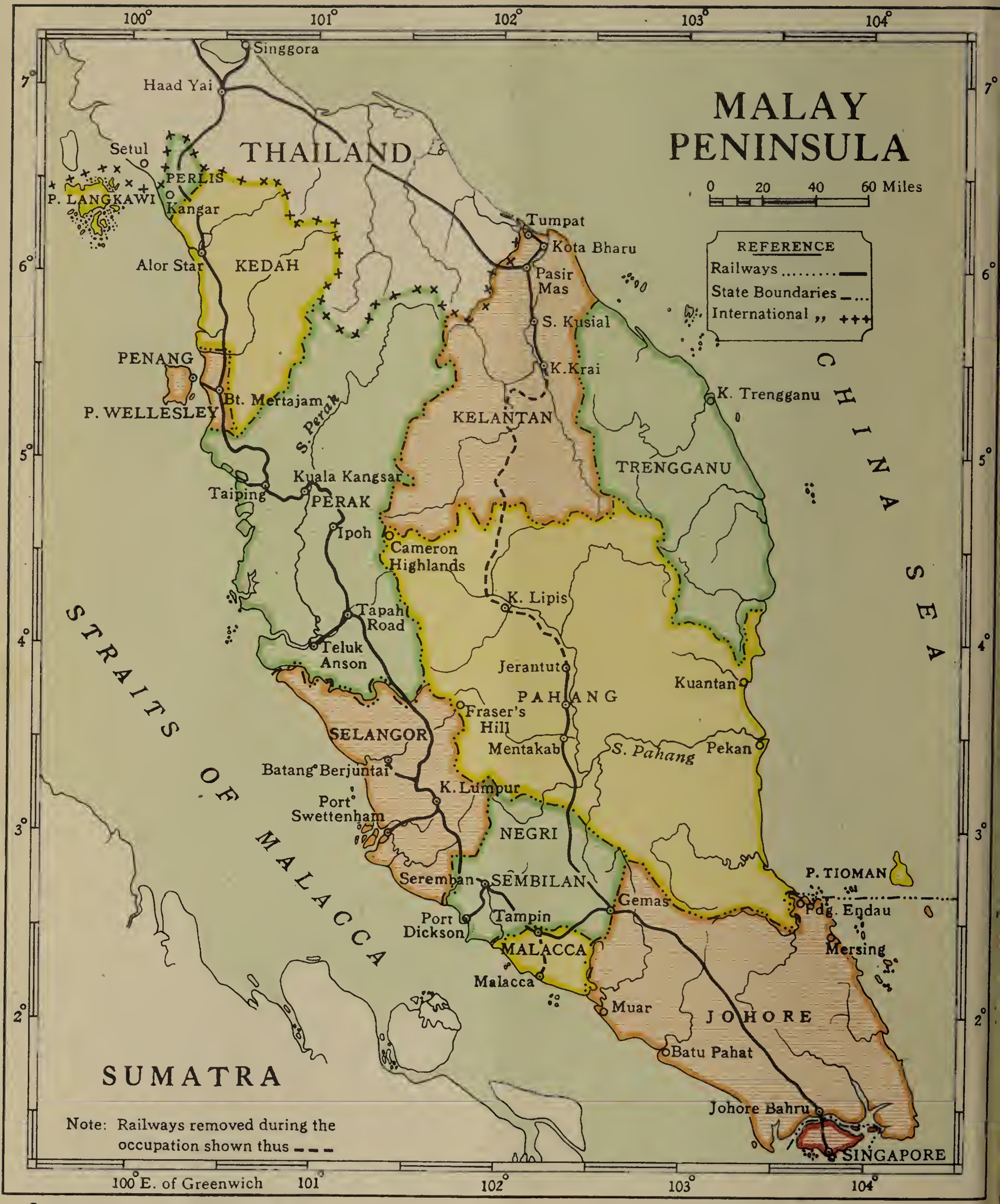
By
E. A. STRUTHERS,
M.B., Ch.B., D.P.H., D.T.M. & H.
Acting Director, Medical Services



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FOREWORD.

This Federal report deals with the general trends of public health, with developments of Federation-wide interest and with the account in greater details, of the work of the Federal Institutions.

The vital statistics for the year show that 1950 has been moderately healthy. The birth rate has dropped from 43.8 to 42.0 per 1,000, and the death rate has increased from 14.2 to 15.3 per 1,000. The infantile mortality rates for the three principal races—Chinese, Malaysians and Indian have correspondingly increased and the maternal mortality for all races remained practically unchanged at 5.3 for 1,000 live births.

The incidence of malaria and pulmonary tuberculosis has appreciably decreased.

A new section for the care of premature infants has been established in the Maternity Hospital in Penang and this is proving valuable in relation to the training of nurses in the care of premature infants.

In spite of the increased activities by terrorists better co-ordination has been established between the hospitals and the Child Welfare and School Health Services during the year.

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FEDERATION OF MALAYA.

REPORT OF THE MEDICAL DEPARTMENT FOR THE YEAR 1950.

PART I.

(1)—CLIMATE, AREA AND POPULATION.

1. Climate.—The climate of Malaya is fairly healthy but it is monotonously warm with a high humidity. The average daily temperature is 80°-90°F. with a drop of 5°-20°F. at night. The average annual rainfall is approximately 100 inches.

Although the climate is equatorial, the incidence of diseases commonly associated with the tropics is relatively low. The large towns are almost entirely free from malaria and the use of mosquito nets is mainly for protection from nuisance mosquitoes. In some towns nets are hardly necessary. Water supplies, which are controlled by the Public Works Department, are of high quality in all the large towns and in most of the smaller ones.

2. Area.—The land coming within the administration of the Federation of Malaya is a peninsula situated between 7° and 1° North and 100° and 104° East. No part of it is more than 100 miles from the sea. The area of the States and Settlements is shown below:

Kedah	3,648	sq. miles
Perlis	310	,,
Penang	110	,,
Province Wellesley	290	,,
Perak	7,980	,,
Selangor	3,160	,,
Negri Sembilan	2,580	,,
Malacca	640	,,
Johore	7,878	,,
Kelantan	5,870	,,
Trengganu	5,000	,,
Pahang	13,820	,,
Total Federation of Malaya ...	51,286	,,

3. Population.—The estimated population of the Federation at the end of 1950 was 5,291,708. This total is 144,701 above the figure for 1949.

The estimated mid-year population was 5,226,549 comprising Malaysians 2,579,914, Chinese 2,011,072, Indians 564,454 and others 71,109.

By States and Settlements, the 1950 population is as follows:

States/Settlements.	Estimated population on 31.12.50.	Estimated mid-year 1950.	Estimated mid-year 1949.
Kedah	596,757	589,200	574,808
Perlis	75,790	74,887	72,976
Penang	478,945	473,227	461,243
Perak	1,031,957	1,018,603	989,949
Selangor	776,182	764,282	740,337
Negri Sembilan	293,067	288,548	279,125
Malacca	261,617	258,508	250,054
Johore	809,142	797,942	771,686
Kelantan	467,828	464,313	454,976
Trengganu	234,591	233,171	228,673
Pahang	265,832	263,868	258,021
Total Federation	5,291,708	5,226,549	5,081,848

(2)—ADMINISTRATION.

4. Organisation.—The public health organisation follows the general pattern of the administration and comes under the headings of Federal and Settlement activities. The Federal division is responsible for the general guidance of public health policy and specifically for the enforcement of quarantine and the control of epidemic diseases.

Each State and Settlement has a medical headquarters from which the hospital and health services are jointly administered. On the health side there are medical officers of health in each State and working under them are Sanitary Inspectors attached either to the Town Boards or directly under the Health Officers in the rural areas. Each Sanitary Inspector is responsible for an area with a population varying between 5,000 and 10,000 persons. Hospitals exist in all the large towns and in many of the smaller ones.

Specialist officers are attached to the large hospitals and their services are available if required anywhere within the States or Settlements. Certain specialist officers are Federal and they may be called upon to visit and advise in any State or Settlement in the Federation.

In all the main towns, there is either a Municipality or a "Town Board" which is responsible for the control of sanitation and the prevention of infectious diseases within its boundaries. Government Health Departments in the different States exercise supervision over the labour forces employed on plantations and mines and ensure that there is a reasonable minimal standard for housing, water supplies and the control of malaria, by draining, oiling or the administration of prophylactic drugs. Recently, the pressure of bandit activity has resulted in a regrouping of labour on estates so that protection from bandits can be more readily given. This has entailed considerable rebuilding of labourers lines.

The staff employed throughout the country on public health work, exclusive of Municipalities which have their own health staff, is made up as follows:

Medical Officers of Health	26
Health Inspectors or Sanitary Inspectors	128
Public Health Sisters	35
Public Health Nurses	113

Considered against a population of approximately five millions this public health staff is small by western standards, but it is probably higher than would be found in most of the eastern tropical territories. The above staff does not include Medical Officers and Nurses engaged in clinical work.

5. EXPENDITURE ON MEDICAL AND HEALTH SERVICES.—The total direct expenditure by the Federal, State and Settlement Governments on medical and health services was $29,383,355.42. In addition to this, account must be taken of the amounts expended on public health work in Municipalities and also on estates for their hospitals, medical practitioners and anti-malaria control. An indication of the extent of the health services on estates is the fact that they have a total hospital accommodation of 5,731 beds.

6. STAFF.—Shortage of medical officers, both European and Asian, has been a serious handicap to the development and even maintenance of work during the past year. At the end of the year the position in the Federation was that out of an establishment of 330 posts for medical officers 134 were unfilled and a further 39 were held by temporary officers as compared with 106 unfilled and 35 held by temporary officers out of an establishment of 305 in 1949. There appears to be no prospect of any improvement in this position in the near future. The figures shown make no provision for leave reserve. Details of establishment and present staff are given in the Appendix (Table 15).

7. LEGISLATION.—The following legislations affecting the Medical Department were passed during the year:

The Registration of Dentists (Amendment) Ordinance, 1950;

The Nurses Registration Ordinance, 1950;

The Venereal Diseases Proclamation (Repeal) Ordinance, 1950.

PART II.

PUBLIC HEALTH—(1) VITAL STATISTICS.

8. The vital statistics for the year show that 1950 has been moderately healthy.

The general birth rate is 42.0 per 1,000 population at mid-year 1950. The general death rate is 15.8 per 1,000, while the infantile death rate increased to 102 per 1,000 live births.

9. While the population of the three main races continues to increase, the decline in the birth rate has been greater amongst the Chinese and the Indians and Pakistanis than amongst the Malaysians, but the increase in the death rate was greater for the Malaysians than for the other two races.

The increase in the death rate, although only slight, is notable for the fact that it is a reversal of the continued decrease since 1946.

10. POPULATION.—The estimated population of the Federation at the end of 1950 was 5,291,708. Details are given earlier in the report (paragraph 3).

11. BIRTHS AND DEATHS—*Births.*—The live births registered in 1950 were 219,512 (112,512 males and 107,000 females) compared with 222,782 in 1949. This gives an average of 18,293 per month against 18,565 in 1949.

The birth rate for all races was 42.0 per 1,000 (43.8 for 1949).

By races the birth rates were:

		1949 rates.
Malaysians	41.9 per 1,000	(43.2)
Chinese	41.7 ,,	(46.6)
Indians and Pakistanis ...	44.9 ,,	(48.9)

Deaths.—The deaths registered in 1950 were 82,554 which is 10,142 more than recorded for 1949 (72,412). The death rate for all races, calculated on the mid-year population, was 15.8 per 1,000. The corresponding death rate for 1949 was 14.2.

The death rates by races were:

Malaysians	18.7 per 1,000
Chinese	12.7 ,,
Indians and Pakistanis	13.6 ,,

Increase of Population.—The "natural" increase (births minus deaths) therefore amounted to no less than 136,958 which is 2.6 per cent. of the estimated mid-year population, whereas in England and Wales, with an estimated mid-year population of 43,830,000 the figure is .41 per cent. resulting from a "natural" increase of 181,459 during the corresponding period.

12. INFANTILE MORTALITY.—The deaths of infants under one year numbered 22,301 out of 82,554 deaths at all ages. There were 219,512 live births, and the infantile mortality rate is 102 per 1,000 live births. The corresponding figures for 1949 were 17,953 under one year out of 72,412 with an infantile mortality rate of 81.

The racial distribution of infantile mortality is as follows: (the corresponding figures for 1949 are in brackets).

Races.	Infant Deaths.		Births.		Infantile Mortality Rates.	
Malaysians	13,075	(10,094)	108,173	(108,578)	121	(93)
Chinese	6,199	(5,451)	83,830	(85,134)	74	(64)
Indians and Pakistanis ..	2,883	(2,283)	25,369	(26,946)	114	(85)
All Races	22,301	(17,953)	219,512	(222,782)	102	(81)

An analysis of the infantile mortality shows that the increase in proportion of deaths has occurred in all racial groups but there is a significant difference in the distribution of this increase. It amounts to an increase of 10 per 1,000 amongst Chinese, 28 per 1,000 amongst Malaysians and 29 per 1,000 amongst Indians. This is probably the result of increased employment of women on plantations, with the resulting loss of the mothers' care of these infants and also possibly to changes in dietary habits of the mothers and the food given to the children. Further particulars are given in the section on Nutrition (paragraph 42).

13. Maternal Mortality.—The total maternal deaths were 1,172 for 219,512 births, compared with 1,189 for 222,782 births in 1949.

The maternal mortality by race was:

Malaysians	7.0 per 1,000 births
Chinese	3.3 ,,
Indians and Pakistanis	5.2 ,,
All Races	5.3 ,,

14. Principal Causes of Death.—Out of a total of 82,554 deaths only 19,070 (about 23 per cent.) have been certified by a medical man. It may, therefore, be expected that the classification is far from accurate. "Fever" of unknown origin accounts for 9,775 deaths. Malaria accounted for 1,011 deaths, compared with 1,184 in 1949.

The other principal causes are given below—(1949 figures in brackets):

(*a*) Pulmonary Tuberculosis	3,109	(3,305)
(*b*) Pneumonia	2,505	(1,951)
(*c*) Premature Births	2,159	(1,914)
(*d*) Violence	3,131	(2,513)

PUBLIC HEALTH—(2) SPECIAL DISEASES.

15. The public health problems of the Federation of Malaya are the prevention of malaria, the reduction of tuberculosis and venereal diseases, the eradication of yaws, the control of major infectious diseases, particularly smallpox and cholera and the treatment of leprosy. The prevention and the treatment of the other common tropical diseases, particularly tropical typhus, and the improvement of the general standard of nutrition and health, especially the care of mothers and young children, constitute an equally important part of the work of the Health Services.

16. Malaria.—The incidence of malaria during the year was again low. There was the usual peak in May and June, but when one compares the incidence in 1950 with that of 1946, the amazing drop in the number of cases will be noted.

Active field experiments in the control of malaria, under conditions applicable in scattered peasant houses, by the use of insecticides and by the controlled administration of Paludrine are still continuing. Unfortunately, from the experimental point of view, the low transmission rate of malaria has prevented any clear-cut conclusions from being made at this stage.

17. The number of malaria cases treated in Government hospitals were 14,559 with 328 deaths, compared with 17,731 cases and 441 deaths in 1949. Blackwater fever remains very rare.

18. THE MALARIA ADVISORY BOARD.—The constitution of the Board is as follows :

Six Permanent members (Medical)	The Director of Medical Services (*Chairman*). The Director, Institute for Medical Research (*Vice-Chairman*). The Senior Malaria Research Officer. The Entomologist, Institute for Medical Research. The Senior Medical Officer, Military Forces. The Principal Medical Officer, Royal Air Force.
Five Permanent members representing Government departments	Representing: Railways. Public Works. Drainage and Irrigation. Education. Agriculture.
Members nominated by His Excellency the High Commissioner.	
Five Medical Officers in the Public Service appointed by name	These include the Deputy Director, Medical Services, and four State Heads of the Medical Department, with experience of anti-malarial work.
Five Medical Practitioners not in the Public Service	These are all Estate Medical Practitioners with anti-malarial experience.
Two representatives of planting interest nominated after consultation with the United Planting Association of Malaya	One Asian and one European planters' representative.
One member nominated to represent labour interests.	
Four other nominated members	One is an Administrative Officer and three are medical men.

The Secretary of the Board is either the Entomologist or the Malaria Research Officer, Institute for Medical Research.

In addition to members, the following guests were present at meetings:

Representatives of the Director of Medical Services, Singapore, and the Municipal Health Officer, Singapore; Surgeon Commander G.H.G. Southwell-Sander and Surgeon Lt.-Commander A. Robinson representing the Royal Navy; Colonel P. F. Palmer, A.D.M.S., Malaya District; Professor J. H. Strahan and Dr. W. A. Nicholas of the Department of Social Medicine and Public Health, University of Malaya; Dr. W. Puleston-Jones, Municipal Health Officer, Kuala Lumpur; Dr. R. Calderwood, Deputy Chief Medical Officer, Penang; Dr. J. F. B. Edeson, Malaria Research Officer, and Mr. R. H. Wharton, Entomologist, of the Tampin Branch of the Institute for Medical Research.

Meetings of the Board were held on 4th March, 26th August and 2nd December, 1950.

The following is a summary of the subjects discussed by the Board in 1950.

19. Judging from hospital admissions, the incidence of malaria was even lower than in 1949. This decrease was general throughout the country, but there is some possibility that it is more apparent than real, as pressure on hospital accommodation may have resulted in malaria cases being treated as out-patients, instead of being admitted to hospitals.

The case mortality rate shows a slight increase from 2.1 per cent. in 1949 to 2.7 per cent. in 1950.

In the past, the incidence of malaria has shown a tendency to fluctuate in unison with the activity of the rubber industry.

20. PROGUANIL (Paludrine):

(a) *In Malaria prophylaxis.*—The use of proguanil for the prophylaxis of malaria in Malay School children was described by Dr. M. I. Mohamed, Health Officer, Selangor Coast, and Dr. R. Calderwood, Deputy Chief Medical Officer, Penang. Provided that the teachers took an interest in the work and administered the drug regularly, doses of 100 mg. proguanil weekly were sufficient to produce a considerable fall in parasite and spleen rates.

Proguanil is widely used throughout Malaya as a suppressive drug, and where dosage is regular the results have been generally satisfactory. Haphazard and irregular dosage with any suppressive drug is unlikely to be effective in preventing malaria, but with proguanil this practice carries the special risk that it may facilitate the development of proguanil-resistant strains of malaria parasites.

(b) *In Malaria therapy.*—The occurrence of such proguanil-resistant strains of *P. falciparum* in the Tampin area of Negri Sembilan was mentioned in the Annual Report for 1949.

The implications of this finding were discussed at the first meeting of the Board in March, 1950. Malaria Advisory Board Circular No. 5 was later prepared by the Malaria Research Division of the Institute for Medical Research Federation of Malaya, and issued by the Board for the guidance of medical and health officers; this circular reviews the known facts about proguanil, describes the ways in which resistant strains are thought to have been developed, and suggests possible remedies.

21. DDT AND BHC (GAMMEXANE).

(*a*) *As residual sprays.*—Malaria Advisory Board Circular No. 6 was prepared by the Division of Entomology, Institute for Medical Research, Federation of Malaya, and issued by the Board. It gives provisional recommendations for the use of DDT and BHC against mosquitoes and other insects in Malaya.

At the meeting of 26th August, 1950, Mr. J. A. Reid and Mr. R. H. Wharton, Entomologists, Institute for Medical Research, described experiments with these insecticides against adult *Anopheles maculatus* and other Malayan mosquitoes, using window-trap huts. Doses of 200 mg. DDT per square foot and 40 mg. gamma BHC/sq.ft. killed more than half the *A. maculatus* adults entering the huts up to 22-23 weeks after a single application. Other Malayan mosquitoes, showed a wide range of susceptibilities to these insecticides used as residual sprays, and *A. maculatus* appears to be more susceptible than most other species so far investigated. These trap-hut results have been largely confirmed by the entomological observations carried out in Malay rural areas near Tampin where DDT and BHC are being used in the experimental control of rural malaria.

(*b*) *As larvicides.*—At the meeting of 2nd December, 1950, Mr. J. A. Reid, Entomologist, Institute for Medical Research, described experiments with DDT and BHC as larvicides. Although the cost should be much less than that of ordinary oiling methods, there was difficulty in ensuring an even spread of small quantities of oil solution on the following water in drains and seepages which form the chief breeding places of *A. maculatus*. DDT emulsions gave as good results as oil solutions. Wettable powders were found to be less effective than oil solutions or emulsions.

22. MALARIA CONTROL IN RURAL AREAS.—An experiment in the control of malaria in rural areas by the use of DDT and BHC as residual sprays in houses and proguanil as a suppressive

drug, has been in progress in Negri Sembilan since 1949. It is sponsored by the Colonial Insecticides, Fungicides and Herbicides Committee, and by the Colonial Medical Research Committee, and is being carried out in Malay rural areas where the vector is *A. maculatus*.

The progress of this experiment was described at the meetings of the Board in March and December, 1950. An untreated comparison area has shown a higher ratio of malaria patients attending the dispensary, a higher proportion of primary malaria infections among infants, and higher parasite and spleen rates at half-yearly surveys, than have any of the areas where control work has been done.

Observations must be continued for a longer period before deciding which method of control is the most suitable for general use in the rural areas of Malaya.

23. CHOLERA.—Cholera has not appeared in Malaya during 1950. There are two sources of introduction of cholera—from Siam across the northern border and by immigrants from India. Immigration from India has been on a reduced scale and throughout the year there was no introduction of infection from this source.

24. PLAGUE.—No cases of plague have been reported for several years. There was none in 1950.

25. SMALLPOX.—No cases of smallpox occurred during the year. Vaccinations performed were 370,318.

26. TROPICAL TYPHUS.—This disease is still prevalent but thanks to the introduction of chloromycetin and allied drugs, the number of deaths has been very considerably reduced.

There were 573 cases reported during the year with 6 deaths.

27. ENTERIC FEVER.—This disease is endemic in Malaya. The number of cases reported was 887 with 96 deaths.

28. DYSENTERY AND DIARRHOEA.—These diseases are not notifiable. Hospital statistics show admissions as 6,509 with 840 deaths. There is nothing to indicate that these diseases were more prevalent than normally.

29. DIPHTHERIA.—Nine hundred and one cases of diphtheria occurred with 242 deaths.

30. CEREBRO-SPINAL MENINGITIS.—Fifteen cases were reported with 6 deaths. There was no epidemic of either diphtheria or cerebro-spinal meningitis, cases occurring sporadically.

31. POLIOMYELITIS.—Forty-four cases were reported with 3 deaths.

32. YAWS.—Yaws in Malaya is a disease of the rural population particularly Malays. Before the war, it was under control in the places which were easy of access. During the war all treatment stopped and the incidence increased to such an extent that in some parts of the country, particularly on the East Coast, almost every child was affected. This condition

has been treated chiefly by arsenical injections and the disease is now approaching its pre-war proportions. It is still common amongst Malay children in nearly all areas away from the larger towns, but the epidemic incidence of florid cases has ceased. It is still very common in the places that are out of reach of the travelling dispensaries.

The number of cases treated throughout the Federation was 35,657—of these 22,044 were children under the age of 10 years.

33. PULMONARY TUBERCULOSIS.—Tuberculosis is now the disease which has become most prominent in the minds of the public, and this is stimulating an active advance on the part of Government public health agencies and voluntary bodies.

The provision of hospital accommodation for the treatment of tuberculosis has been increased and is being steadily improved. Active treatment, principally with pneumoperitoneum, is now being carried out on a fairly wide scale over the whole of the country. The total number of beds available for the treatment of tuberculosis is now 2,788.

The tuberculosis wards in the General Hospital, Malacca, have been brought up to the standard of a modern specialised hospital for tuberculosis, and it has good facilities for thoracic surgery. There is an out-patient clinic with its own laboratory and X-ray plant, and the mass fluorescopy apparatus has been in use since March, 1950. The mass fluorescopy apparatus is readily used for the proper control of all the pneumoperitoneum work and it has become, perhaps, the most commonly used single form of active treatment for pulmonary tuberculosis.

This method of screening is a new departure from the old one in which patients enter the same room as the doctor who is carrying out the fluorescopic examinations. As the room is in complete darkness it takes time to get the patients into position, little children are terrified of the dark and the operator is exposed, not only to an atmosphere which becomes heavily impregnated with the tubercle bacillus, but also to the added risk of secondary irradiation. In this clinic the patients stand outside the room in the daylight while the operator carries out the examinations from inside the room which makes for speed in examining patients, children are not frightened because they are in the daylight and their relatives can stand beside them and the operator is no longer exposed to the dangers mentioned above.

The Settlement of Pulau Jerejak, Penang, has been extended to provide accommodation for 250 cases of the more advanced type, and further expansion will be carried out with the help of a grant from the Colonial Welfare and Development Fund.

Hospital statistics show 6,305 admissions for tuberculosis with 1,767 deaths, compared with 6,510 admissions and 1,916 deaths in 1949. The effect of providing more and better accommodation is that patients with tuberculosis are staying in hospital longer. Most of them are advanced chronic cases, but the number of early cases coming for active treatment is increasing. Good facilities for modern active treatment are provided in Penang, Malacca and Johore Bahru, and to a less specialised degree, in all the larger hospitals.

Much of the X-ray equipment lost during the war has now been replaced. Investigations into the tuberculin reactions in school children were continued, and screening of positive reactors was introduced.

34. Deaths in the Federation registered as due to pulmonary tuberculosis numbered 3,109. This represents a death rate of 59 per 100,000 of population. Diagnosis of the cause of death is still far from complete, and the true figure is estimated to be about double this rate.

35. As a result of an agreement made between the World Health Organisation and the Federal Government, U.N.I.C.E.F. sent out a team of experts (one doctor and two sisters) who arrived in Johore Bahru towards the end of the first week of December. Their function is to teach members of the Medical Department how to use B.C.G. vaccine. Teams from Batu Pahat and Muar have come to Johore Bahru and undergone a 14 days course of instruction. From the General Hospital, Johore Bahru, more than three other teams have received training. Once supply lines are consolidated and we have settled down, this work will gather momentum.

It is too soon to make any estimates of the popularity of this vaccination but up to date there has been a magnificient response, both from the parents of the school children and from the general public itself. By the end of December 1,200 pupils had been tested—of whom approximately 500 were requiring vaccination.

Teams from other States and Settlements will be taught and and it is anticipated that early next year this very important preventive measure will form part of the routine work of Maternity Hospitals, Women's and Children's Clinics and schools. In addition, outdoor clinics for the treatment of adults will be opened in all the bigger towns, and if staff becomes available this work should proceed right into the most isolated rural areas.

It must be stressed that B.C.G. is not a cure and one must not rest one's oars and leave the other important matters of housing, economics and general lines unpursued in the fight against tuberculosis.

36. TUBERCULOSIS ADVISORY BOARD.—There is an official Tuberculosis Advisory Board containing both medical representatives and members from all sections of the public, and there is also a voluntary unofficial Association for the Prevention of Tuberculosis which has branches or affiliated societies in every State and Settlement.

The Board was constituted in 1947 and its membership was expanded in 1948. The membership now is as follows:

Director, Medical Services, Federation of Malaya—(*Chairman*).

Ten members—one from each State or Settlement. (Kedah and Perlis sending one representative).

Four members from the Federal Legislative Council appointed by the High Commissioner.

One member nominated by the Rotary Clubs.

One member nominated by the Central Welfare Council

Four medical members—one nominated by the British Medical Association (Malaya Branch), one member nominated by the Alumni Association of the College of Medicine, and two medical officers in the public service.

Three Departmental Officers representing Education, Public Relations and Welfare.

The Director of Medical Services, Singapore, is represented by a medical officer who attends as an observer.

Three meetings were held during the year.

37. The Board discussed housing legislation from the point of view of the prevention of tuberculosis and recommended that Government should appoint a technical committee of experts to consider and make recommendations regarding the design of houses, including shop-houses, in congested areas.

38. A motion on the employment of persons who have recovered from Tubercular diseases was carried out by the Board urging all employers to give employment to men and women who have suffered from tuberculosis and whose disease has been arrested. Such persons should be employed only when they are not infective and are physically fit to perform the work they are requested to do and with proper safeguards for the health of other workers.

39. The Board expressed its gratitude and placed on record its thanks to Government for having granted financial support in response to an appeal submitted by the Board to open up the tuberculosis hospital at Kuala Langat.

40. Leprosy.—The incidence of leprosy remains the same as it has been over the past few years and there are now 3,017 cases of leprosy under treatment in Government institutions. This figure does not represent the total incidence of leprosy in Malaya, but it is rare to see a leper who is not under treatment.

A report of the work of the leper settlements is given in a later section—(paragraphs 89 and 90).

41. Venereal Diseases.—The incidence of venereal diseases is still high, but it is lower than it was before the war. The number of cases applying for treatment during the years 1945 and 1946 was above the pre-war average. Since 1947 there has been a steady decline.

The following figures indicate the number of new cases applied for treatment at Government clinics and hospitals in 1949 and 1950:

New Cases.	1949.	1950.
Syphilis	10,960	9,048
Gonorrhoea	5,651	5,079
Other V.D.	1,866	2,002
Total	18,477	16,129

These figures do not show the total incidence, but in places where conditions regarding facilities for treatment have been constant for many years it is clear that the incidence is declining.

A detailed Return of Venereal Diseases treated in Government Hospitals and Clinics, showing diagnosis and distribution by race and sex is included in the Appendix—(Table 12).

PUBLIC HEALTH (3)—NUTRITION.

42. The following are the numbers of cases admitted to hospital from diseases partly or wholly due to malnutrition:

	1946.	1947.	1948.	1949.	1950.
Beri-beri	1,396	939	551	505	634
Anaemia	7,982	6,063	5,420	4,490	4,406
Skin Ulcers	14,182	7,273	5,063	3,835	2,421

The incidence of beri-beri has increased and is higher than it has been for any year since 1947. During the year the under-milled rice in the ration has been replaced by a highly milled commodity and the future trend of events in respect of this disease will be watched with interest. It is held by some workers that a rise in the infantile mortality rate among rice eating people may, in the absence of other obvious cause, indicate a general depletion of Vitamin B_1. This may not be associated with much diagnosed frank beri-beri for the following reasons. Firstly, the infant is more susceptible than the individual in any other age group and the disease is acute and death may occur rapidly; secondly, it is not always a readily recognisable clinical entity and lastly, it often occurs among people who have not fully recognised the benefits of western medicine. It is of some interest, therefore, to note that the infantile mortality rate in the whole country has increased from 81 per mille in 1949 to 102 per mille in 1950.

Anaemia, as a cause of admission to hospital, shows little change. Investigations carried out in the Institute indicate that the commonest form is an iron deficiency anaemia and that it is not primarily produced by parasitic infection. There is, on the other hand, a steady marked down trend in the number of cases admitted to hospital from skin ulceration.

43. Child Feeding Schemes.—The vote for the supplementary feeding of school children was reduced to $500,000 for the year 1950. It was also decided that in 1951 it should be a state vote. A committee consisting of the Director of Medical Services, the Director of Education, the Chief Social Welfare Officer and the Senior Nutrition Officer was appointed to decide how this money could best be utilised in 1950. It was decided to allocate it to the different States and Settlements and throughout the year the organisation and administration of the schemes for feeding children have been in the hands of the State and Settlement authorities.

PUBLIC HEALTH (4)—ESTATES, MINES, RAILWAYS, QUARANTINE.

44. Health on Estates.—The general health of labourers has improved, the outstanding feature being the low incidence of malaria. Added to that is an improvement in labourers' diets. The danger of attack by bandits while visiting estates has made the work of the estate medical practitioners more difficult.

The estate hospital position is not entirely satisfactory. There is a tendency to close some hospitals and the effect of this is to throw an additional strain on the Government hospitals.

The rationalisation of the hospital position is overdue and will have to be considered as part of the plan for the improvement of rural health generally.

45. ESTATE HOSPITALS.—The following table is a summary of the provision made by employers for the treatment of sick labourers and their dependants on estates:

States/Settlements.	No. of Estate Hospitals.	No. of Beds.	All Diseases.		Malaria.	
			Admissions.	Deaths.	Admissions.	Deaths.
Kedah	13	1,014	16,393	293	1,751	12
Perlis	—	—	—	—	—	—
Penang and Province Wellesley	3	205	926	6	29	—
Perak	31	1,127	15,752	347	287	5
Selangor	31	1,296	21,520	645	618	5
Negri Sembilan	19	1,037	11,972	329	650	5
Malacca	13	280	3,760	38	320	—
Johore	15	528	4,973	111	196	3
Kelantan	5	82	1,241	14	98	—
Trengganu	5	64	6,641	33	776	5
Pahang	4	98	949	10	73	1
Total	139	5,731	84,127	1.826	4,798	36

The following table is a summary of the statistics relating to mortality amongst labourers on estates:

	Population.	All Diseases.		Malaria.	
		Deaths.	Death rate per mille.	Deaths.	Death rate per mille.
Labourers and Dependants—All nationalities	417,123	2,957	7.09	58	.14
Labourers only—All nationalities	269,685	779	2.89	30	.11
Labourers and Dependants—Indians	241,423	2,311	9.57	36	.15
Labourers only—Indians	148,311	574	3.87	19	.13

46. The low incidence of disease and the low mortality amongst labourers on estates is now taken as a matter of course. It is interesting to look back and examine the conditions that existed only 30 to 40 years ago. The table below shows the comparison:

F.M.S.	Estate Mortality Rates.		
	Total number of Estate Labourers.	Deaths.	Death rate per mille.
1911	143,614	9,040	62.9
1912	171,968	7,054	41.02
1913	182,937	5,592	29.6
1914	176,226	4,635	26.3
1915	169,100	2,839	16.78
1918	213,425	9,081	42.55
	(Influenza epidemic)		
1919	216,573	3,384	16.16
1920	235,156	4,367	18.57
1921	175,649	3,195	18.19
F. of M.			
1949	351,968	940	2.7
1950	269,685	779	2.89

47. HEALTH ON MINES.—Only a few mines have their own hospitals and medical practitioners. There are notable exceptions in the case of two large mining undertakings on the East Coast, and some tin mines make arrangements for visits by medical practitioners. In most cases sick labourers are sent to Government hospitals. The provision of adequate hospital arrangements for mine labourers and the sanitary control of mining lands and houses will have to be considered in the plan for rural health services.

48. RAILWAY SANITATION.—The health work of the Malayan Railway is under the charge of a medical officer seconded from the Government service. His staff consists of 16 Hospital Assistants, 3 Health Inspectors, 18 Anti-Malarial Inspectors and a labour force of 92 men. The duties of this officer comprise the medical treatment of railway staff and their dependants, sanitation in railway areas and anti-malarial work on railway property. The anti-malarial measures are oiling, DDT barrier spraying and personal chemical prophylaxis.

Thirteen railway dispensaries functioned during the year and 74,668 attendances of railway staff and their dependants were recorded. First aid instruction based on the St. John Ambulance handbook was given to 311 employees. First aid boxes and stretchers are available on all passenger trains, workshops and at all stations.

49. PORT HEALTH WORK.—During the year one hundred and fifty-five immigrant ships from India, forty-four from China, three pilgrim ships from Jeddah and one hundred and eighty-six from other infected ports arrived, carrying a total of 57,103 saloon and deck passengers.

Outgoing Pilgrim Ships.—Two pilgrim ships carrying 3,875 pilgrims left the port during the period.

A family consisting of four persons from Alor Star, Kedah, had to be rejected as the son, aged about eight years, was found to be suffering from chickenpox. Case and contacts were sent to the Perak Road Hospital, Penang. Their places were filled by four others who were unable to obtain passages before.

Incoming Pilgrim Ships.—Three pilgrim ships carrying a total of 3,525 pilgrims arrived during the period. A total of 25 deaths occurred on these ships and the deaths were chiefly due to senile debility.

50. SUMMARY OF PORT HEALTH WORK.—

	Number of visits of inspection to ships.	Total Passengers.		Total Examined.		Passengers.		
		Cabin.	Deck.	Crew.	Passengers.	U	Q	R
Penang	388	13,769	43,334	33.592	57,103	8	17	19,396
Port Swettenham	119	678	2,174	7,165	2,852	—	—	2,255
Total	507	14,447	45,508	40,757	59,955	8	17	21,651

U — Signed undertaking to report.
Q — Removed to Quarantine Station.
R — Remained in Ship.

51. QUARANTINE STATION.—The Quarantine Station, Pulau Jerejak, which ceased to function after the end of July, 1948, is still being used as a Detention Camp under the supervision of the Prisons Department. It is hoped that in 1951 arrangements will be completed with the Prisons Department to obtain the return of certain parts of that camp which will be capable of accommodating a limited number of contacts requiring quarantine.

52. VACCINATIONS AND INOCULATIONS PERFORMED AT THE PORT HEALTH OFFICE.—During the year 14,042 vaccinations and 10,198 inoculations were performed. Out of the total number of vaccinations performed 13,860 were re-vaccinations for purposes of International Certificates.

53. INSPECTION OF AIRCRAFT.—A total of 234 planes were inspected during the year (144 at the Bayan Lepas Aerodrome and 90 at Permatang Kuching Aerodrome, Province Wellesley). Altogether a total of 1;036 crew and 3,134 passengers were examined but no case of infectious disease was detected among them.

PART III.

MATERNITY AND CHILD WELFARE.

54. The care of women and children takes a prominent place in the work of the Medical Department of the Federation. There are maternity hospitals run by the Government in all the large towns. In addition, there are voluntary charitable maternity hospitals in some places, run for the benefit of the Chinese, and financed by subscriptions from that community. There are separate maternity blocks in the Government hospitals at Penang and Johore Bahru and maternity wards with well equipped labour rooms in all Government hospitals. These are the training centres for nurses and midwives.

Admissions to all maternity hospitals and wards numbered 38,814 and there were 313 deaths. The figures for the previous year were 37,741 admissions and 280 deaths.

The number of deliveries in Government Hospitals was 32,103 out of a total of 219,512 births in the Federation.

The supply of trained midwives in the urban areas is fairly adequate, but there is need for many more in the country districts.

55. Child Welfare Clinics under the guidance of lady Medical Officers and specially trained nursing sisters and nurses exist in all the large towns, and this service is being extended throughout the country. The attendances of mothers and children at these centres amounted to 873,249 and 310,092 visits were paid to mothers and children in their houses.

A tabulated statement of welfare centres is given in the Appendix (No. 13). Further details are included in the State and Settlement Reports.

56. **Department of Child Health.**—The work of the Department of Child Health has gained during the year by having the benefit of a keen and experienced Child Health Specialist, and she has strengthened the link between the preventive and the hospital side of Child Health Work. During the year, better coalition has been established between the hospitals and the child welfare and school health services. Health education week has been increased in the schools and welfare clinics. A new feature in the welfare clinics is demonstrations of cooking using methods and foodstuffs which are readily available in the homes of the people.

A new section for the care of premature infants has been established in the Maternity Hospital in Penang and this is proving valuable in relation to the training of nurses in the care of premature infants. In this connection, it should be noted that the "international" definition for prematurity includes all children whose weight at birth is 5½ pounds or less. This definition requires revision, for a large number of babies are born in Malaya under this birth weight who show no signs of prematurity and are very lusty.

The following note from the Child Health Specialist is of general interest:

> "The chief clinical disorders met with in the children in Malaya are the result of malnutrition, worm infestation and tuberculosis, so that although the majority of diseases seen in England are also seen in Malaya, yet the approach to disease and its treatment must always bear in mind these three mentioned conditions. Cross infections in children's wards and nurseries appear less prevalent then in colder climates. This is probably due to better ventilation in the open wards in Malaya; nevertheless, it is still a real danger in this country."

It is worthy of note that this impression of children's diseases in Malaya, as seen in Penang, takes no account of malaria nor of the other so-called tropical diseases because they are relatively inconspicuous.

PART IV.

HOSPITALS AND DISPENSARIES.

57. There are 69 Government hospitals in the Federation, not including the special institutions for mental diseases and leprosy. The hospitals range from the large modern buildings in Penang, Malacca and Johore Bahru, all with over 500 beds, through the less modern pavilion types of hospitals such as those in Alor Star, Taiping, Ipoh, Kuala Lumpur and Seremban, still in the 350 to 600-bed category, to small district hospitals. The total number of available beds was 13,332.

During the year 207,483 patients were treated. The daily average number of in-patients was 10,445. The figures for the previous year were 204,608 admissions and a daily average of 10,063 in-patients.

The general condition of the wards and equipment is now reasonably good in all the hospitals, although there are still deficiencies in equipment.

58. A summary of the distribution of hospitals and beds is given below. A tabular statement of hospitals, with daily averages, admissions and deaths, is given in the Appendix (Table No. 1A) and further particulars will be found in the State and Settlement reports.

Summary of Hospital Accommodation.

Name and Location of Hospital.	Number and Category of Beds.				
	General.	Obstetrics.	Tuberculosis.	Infectious.	Remarks.
Kedah	752	77	195	21	—
Perlis	114	12	16	8	—
Penang and Province Wellesley	1,058	140	574	32	—
Perak	2,027	255	350	—	—
Selangor	1,349	153	273	37	—
Negri Sembilan ...	670	100	369	35	—
Malacca	394	60	312	51	—
Johore	1,596	231	466	57	—
Kelantan	371	14	42	29	—
Trengganu	208	12	44	37	—
Pahang	551	65	147	28	—
Total ...	9,090	1,119	2,788	335=	13,332

Total excluding special institutions		13,332
Special Institutions:		
Leper Settlement, Sungei Buloh, Selangor	2,468	
,, ,, Pulau Jerejak, Penang	410	
,, ,, Johore Bahru	302	
		3,180
Mental Hospital, Tanjong Rambutan		3,000
Total—All Beds ..		19,512

59. Out-Patients.—All hospitals have out-patient departments. There are dispensaries in many of the smaller towns and travelling motor dispensaries operate on the main roads. Hospital Assistants in charge of fixed dispensaries travel by bicycles throughout their areas to deal with places which the travelling dispensaries cannot reach. In Johore, Pahang, Trengganu and Kelantan travelling is also done by river. The absence of suitable craft has prevented the complete resumption of the pre-war service on the rivers. The emergency has restricted in the use of travelling dispensaries, though the demand for their services is great.

The total of out-patient attendances was 2,126,353. This figure does not include attendances at Infant Welfare Centres and Venereal Disease Clinics: 685,015 attendances were at Travelling Dispensaries. The figures are slightly higher than in 1949, which showed 1,991,576 attendances, with 642,768 at Travelling Dispensaries.

Details of the distribution of dispensaries and of the patients treated are given in the Appendix (Table No. 5).

Notes on Conditions Treated in Hospitals, Clinics and Dispensaries.

60. Full details are given in Table I of the Appendix. The following gives an indication of the commoner conditions treated in hospital:

Disease.	Admissions.	Deaths.	Mortality per cent.
Malaria	14,559	328	2.19
Pulmonary Tuberculosis	6,305	1,767	28.02
Dysentery	1,675	79	4.72
Diarrhoea and Enteritis	4,834	761	15.74
Pneumonia and Bronco-Pneumonia	4,226	1,154	27.31
Bronchitis	8,402	76	0.91
Beri-beri	618	48	7.77
Venereal Diseases	3,795	55	1.45
Enteric Fever	773	91	11.77
Injuries due to External Causes ..	21,128	650	3.08

61. Racial Distribution of Hospital Admissions and of Common Diseases.—The figures below are an indication of the racial differences in patients seeking admission to hospital, and give little true information about the racial incidence of disease. The number of Indians is disproportionately high, because so many are employed by estates and are sent to hospital whenever this is necessary. Chinese patients tend to come to hospital for more serious or more long standing illness, or when they are driven by inability to work and destitution. Malays, apart from those employed in the Police and other Government Departments, are generally reluctant to seek admission to hospital although they willingly accept treatment as out-patients.

Racial Distribution of Hospital Admissions.

Race.	Malaysians.		Chinese.		Indians.		Others.	
Population ..	2,579,914		2,011,072		564,454		71,109	
Total admissions to hospital ..	50,044		86,224		68,050		5,894	
Disease.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Malaria ..	5,431	36	4,500	221	4,319	61	309	10
Dysentery and Enteritis ..	1,193	64	2,761	526	2,336	242	219	8
Pulmonary Tuberculosis	1,052	151	3,984	1,236	1,164	355	105	25
Pneumonia ..	540	72	2,095	754	1,500	308	91	20
Beri-beri ..	145	6	299	32	165	10	9	—
Appendicitis ..	140	2	787	24	390	10	95	4

62. Malaria Cases in Hospitals.—The number of cases treated in Government Hospitals was 14,559—a reduction of 3,172 from 1949. The distribution of types of malaria, diagnosed microscopically was subtertian 69 per cent., benign tertian 26 per cent., mixed 4 per cent., and quartan 1 per cent.

The seasonal incidence of malaria followed the usual course, the rise beginning in April and reaching its peak in May and June. Details showing the malaria admissions reported monthly for each State are given in Table 2 of the Appendix.

63. SURGICAL WORK.—Surgical operations numbered 31,439: details are given in Table 3 of the Appendix.

64. OPHTHALMIC WORK.—Forty-thousand one hundred and seventeen patients were treated for diseases and injuries of the eye and 2,409 eye operations were performed. Details are given in Table 4 of the Appendix.

65. RADIOLOGICAL WORK.—The replacement of the deficiencies in equipment caused by the war has been completed in most respects and an advance has been made, particularly with X-ray equipment.

A new development of interest is a mobile X-ray unit for pulmonary tuberculosis survey work. This operates in the State of Kedah which has been especially progressive in this respect. Eighty thousand one hundred and three patients have been examined by X-ray and 2,031 patients treated in the X-ray and electro-therapeutic departments.

66. VENEREAL DISEASES.—Cases treated as in-patients numbered 3,795 and 55 deaths in hospitals are recorded as due to venereal diseases: this includes 129 of congenital syphilis. Further particulars are given in the section on special diseases (paragraph 41) and in Table 12 of the Appendix.

PART V.

TRAINING OF NURSES.

67. Since 1946, the training of nurses has been brought back gradually to a standard which is now higher than that accepted before the war. In the earlier post-war years, there was a very grave shortage of suitable candidates for training, because of the lack of education during the Japanese occupation. There were also many other openings, financially more attractive, for girls with a good English education. During 1950, the position has improved, as the schools are turning out more educated girls.

Facilities for training nurses vary greatly in different hospitals. In the larger hospitals, like Johore Bahru, Malacca, Seremban, Kuala Lumpur and Ipoh, they are fairly good, although not yet up to the standard desirable in a complete training school. In Penang, a complete training school has been established, to serve the needs of the northern part of Malaya. This school has developed steadily and has reached the stage when it is ready to expand.

The following paragraphs are taken from a report prepared by the Sister-Tutor in the Training School.

Penang Regional Nursing Training School.

68. **Staff.**—The appointment of a medical officer to the Regional Training School was discontinued in September, 1950.

A qualified Sister-Tutor is in charge of the teaching department and in August, 1950, a member of the World Health Organisation, also a qualified tutor, joined the staff of the school.

The medical staff and dietitian of the hospital render very considerable assistance in the teaching of special subjects.

In June, 1950, a member of the World Health Organisation was attached to the school as a tutor in Public Health and Preventive Medicine.

Buildings.—The classrooms and dormitories are accommodated in "B" Block of the General Hospital, Penang, but owing to increase in the number of students, is now scarcely adequate and, in future, it will be necessary to limit the number of students attending each school. There are three classrooms, one of which has been temporarily partitioned to provide an extra classroom in view of the greater number of classes. A portion of one room has been partitioned for use as a museum: one room has been equipped for the showing of films.

Courses.—The "Block" system is in use and to fit in with school leaving arrangements in this country, the year is divided into three terms of three months each: these are as follows:

BLOCK II ...	3rd	Year	Students ...	January to March
P.T.S. ...	1st	,,	,, ...	,, ,,
BLOCK II ...	3rd	,,	,, ...	May to July
P.T.S. ...	1st	,,	,, ...	,, ,,
BLOCK I ...	2nd	,,	,, ...	September to December
P.T.S. ...	1st	,,	,, ...	,, ,,

In addition, two post-graduate schools of three weeks and four weeks duration are held in April and August. These are specially helpful to students whose training was interfered with by the Japanese occupation.

Both Nurses and Hospital Assistants attend the same courses in basic subjects and special classes are instituted where necessary to suit the requirements of the Hospital Assistants' Training Scheme. The curriculum of the General Nursing Council of England and Wales is followed as it suits our requirements in the training of Nurses.

69. **Enrolment.**—Two hundred and thirty-four students attended the Regional Training School from the following States during the year:

Penang and Province Wellesley	101
Perak	78
Kedah	35
Perlis	4
Kelantan	8
Trengganu	8

By special arrangement with the Chief Medical Officer, Penang, one private student from an estate—Pahang Consolidated Co., Ltd., Sungei Lembing, Pahang, attended a three-month residential course. Another private student from Soon Lee Estate, Bagan Serai, attended the Post-Graduate School in April—also residential. No fees were charged.

Although recruitment of nurses is improving some of the hospitals are unable to allow their probationers to attend all the Blocks necessary to complete their training. Many only attend two out of three blocks and this is not only detrimental from the students' point of view, but results in duplication of lectures in the essential subjects using time that could be more profitably employed. Terminal examinations are held in all subjects.

In addition to the above a Public Health Course was conducted from September to November and six students attended from the following States, viz.: Penang and Province Wellesley, Perak, Negri Sembilan and Selangor. All these nurses were post-graduate students trained in general nursing and midwifery and who had previously been doing child welfare work in their own States but had not received any specific training.

The Public Health Course was arranged in order to help them in the work they were engaged upon and included the following basic subjects:

Hygiene
Preventive Medicine and Public Health
First Aid
Psychology (General and the Psychology of Pregnancy)
Bacteriology
Midwifery
Dietetics
The Child in Health and in Sickness
Infant Feeding.

Other subjects included in the course were to introduce them to as many aspects of their work as possible.

EDUCATIONAL STANDARDS OF ENTRANTS.—The average standard of education is that of Standard VII, though some are only Standard IV and others have gained their School Certificates.

It is obvious that the more senior students are hindered in their studies by their lack of education during the Japanese occupation though the majority of them are very persevering and keen to be successful in their careers.

The students recruited during the latter part of the current year have been better able to cope with their studies, their educational background being much more secure although the average of the class has only been Standard VII.

70. Examinations are held in April and August. A few students achieve a very high standard but the majority only reach the standard set, in both theory and practical work.

Candidates for nursing are now required to pass an entrance examination before being accepted for nursing. The examination has been further developed during the year and now comprises the following subjects:

1. Essay, Dictation and Paragraph comprehension in English;
2. An observation test;
3. The Raven Progressive Matrices—a test which shows their reasoning ability and is not a language test;
4. Each student has a brief talk with the examiner.

TEACHING.—In accordance with the curriculum of the General Nursing Council of England and Wales, Psychology is now an examination subject and has been introduced into the syllabus for the Preliminary Examination. An elementary course in Science is now a recognised part of the curriculum for P.T.S. and Block I students, though lack of laboratory space hampers demonstrations and we have to rely on the co-operation of the Penang Free School for certain experiments. Laboratory equipment is now at our disposal but owing to lack of accommodation, it is for the present in store.

It is our policy to use teaching methods which encourage the students to think for themselves and we have had quite a good response though the students take a long time to drop old habits—such as learning by rote.

We are indebted to UNICEF for much valuable equipment which has been supplied this year. This includes anatomical models and charts of all kinds, biological specimens and charts, nursing models, film projector and films, delineascope and slides, film strip projector, epidiascope, micro-projector and laboratory equipment.

We are beholden to Government and to UNICEF for a number of valuable technical books which are used to the full by staff and students alike.

71. LECTURES AND EDUCATIONAL VISITS.—Lectures are given by the Sister Tutors assisted by the Medical staff and other specialists who lecture in their own subjects. Educational visits are arranged at suitable intervals throughout each term in conjunction with the subjects being taught. They are much enjoyed by the students and we are appreciative of the time and trouble taken by those who arrange them for us. Throughout the course an endeavour is made to interest the student in natural history and environment in relation to health with a view to attaining a wider outlook, particularly on the preventive side.

72. Practical training is commenced in the school and continued by daily visits to the wards. Due to insufficient trained staff supervision of students work in the wards is inadequate.

A tutor for supervision of nursing procedures in the wards would be very beneficial to the students. This is a practice which is now being adopted in the United Kingdom. The tutor is usually attached to the teaching department, but works in conjunction with the ward sisters, arranging with them each day the nursing procedures to be supervised.

Owing to the large number of students it is impossible for them to have sufficient practical ward experience during the course.

73. The courses given in the training school in 1950 comprised 3 preliminary courses with 110 pupils; 3 "block" courses with 81 pupils and "post-graduate" training for 32 nurses and 13 hospital assistants. The total numbers passing through the school were 81 nurses and 37 hospital assistants. The number of nurses who passed their final examination in General Nursing in 1950 was 63.

PART VI.

DENTAL.

74. Dental Surgery.—The number of Dental Officers employed on 31st December, 1950, was 35.

The staff position improved considerably during the year. Six Dental House Surgeons were recruited from the University of Malaya. Three of these were stationed in Penang, two in Johore and one in Ipoh.

Returns of Work.—Table 8 gives a full return of the work done by the Department over the year. The number of attendances is 156,350 an increase of 38,287 over the previous year. The number of fillings done rose from 37,755 amalgam and 7,733 silicate in 1949 to 54,032 and 9,221 in 1950. The proportion of extractions to fillings is still far too high but this is inevitable in dealing with large numbers of school children with an inadequate staff.

Equipment.—Despite short supply in the United Kingdom the stores received from the Crown Agents were sufficient to keep all dental clinics functioning.

UNICEF equipment on a very generous scale was received during the year and this enabled the Dental Nurses' Training School to expand to an intake of twenty nurses.

New Clinics.—Three new Dental Clinics were opened during the year—one in Kuala Kangsar, one in Kluang and one in Balik Pulau. These clinics serve areas hitherto receiving little or no dental treatment. This brings the total number of dental clinics in the Federation of Malaya to twenty-five.

75. Post-Graduate Study Overseas.—During 1950 two locally qualified dental officers who went overseas for higher studies returned.

One dental officer returned from the United Kingdom where he had been successful in obtaining the Fellowship in Dental Surgery of the Royal College of Surgeons, England. He was posted to Johore as Senior Dental Officer, where he is officiating as Specialist Dental Officer in addition to carrying out dental administration for Johore. This is an innovation which gives promise of success.

Another Malay dental officer returned from a post-graduate course in Melbourne, Australia, and was posted to Kuala Lumpur.

76. Training of Dental Nurses.—The Dental Nurses' School at Penang continued to function in a satisfactory manner and the first batch of trainees returned to their States or Settlements to work under the supervision of Dental Officers. Five nurses passed the examination in June and nine were successful in December.

In Penang, dental nurses were stationed in clinics situated in schools. Here they worked as part of the school set-up and were visited by the supervising dental officer. This method of school treatment is probably the best way of employing dental nurses.

PART VII.

SPECIAL INSTITUTIONS.

77. Institute for Medical Research.—The Institute to-day is a branch of the Malayan Medical Service.

It has a central group of laboratories in Kuala Lumpur organised by divisions for bacteriology, biochemistry, entomology, malaria, nutrition and pathology; a lymph station for the production of vaccine lymph; and branch laboratories in the States of Perak and Negri Sembilan. Restricted in its early years to medical research, the Institute has now an added responsibility to the Medical Services for the manufacture of biological products and the laboratory diagnosis of disease. Rather more than one-half of its permanent resources are reserved for medical investigation; but research is not restricted to the Malayan staff, for laboratory hospitality is extended to colonial and foreign research workers and some of the most useful work of the past few years has come from collaborative effort with teams from America and the United Kingdom. During the past year the Institute has welcomed, among others, a third research team from the U.S. Army Research and Graduate School in Washington, while a typhus research team from the United Kingdom, financed by the Colonial Development and Welfare Fund, has operated throughout the year in Malaya and neighbouring territories with the Institute as a base.

78. Bacteriology.—The Senior Bacteriologist was absent in Europe for most of the year. He visited the laboratories of the Pasteur Institute in Paris and the State Serum Institute, Copenhagen, to study the methods of manufacture of BCG vaccine, and attended the International Congress on Anti-biotics held in Milan in May, contributing by invitation a paper on the use of chloromycetin in Malaya. There was necessarily some restriction of the divisional research programme. Experiments in collaboration with the Lymph Station have been made to determine whether streptomycin can be used to destroy the gas-forming anaerobic bacteria which have led in the past to the rejection of many batches of vaccine lymph. The preliminary results are encouraging. The effects of the anti-biotics Chloromycetin and Aureomycin on *Leptospira* are being investigated *in vitro*. At a concentration of 80 μ gm per cc Chloromycetin inhibited the growth of *Leptospira*. The plasma

concentration of Chloromycetin during treatment may attain this level and it is possible that the drug may prove to be a useful alternative to penicillin in the treatment of human leptospirosis.

The Perak branch of the Institute has continued trials of rapid methods for growing tubercle bacilli in the chick embryo. The recognition of infection is now supplemented by histological examination of the chorio-allantoic membrane. In co-operation with the Perak Medical Department a small-scale study has been made of the effect of TAB inoculation on the Widal reaction. Examinations made two months after inoculation in 200 members of the Taiping Hospital staff showed that a marked rise in the Widal titre was usual.

79. BIOCHEMISTRY.—The problems of nutrition in Malaya and the more complicated routine examinations beyond the scope of the hospital laboratories have taken up most of the time and resources of the Division of Biochemistry during the year. A small laboratory rice mill has been installed for the study of controlled methods of parboiling rice, and the distribution of thiamine and riboflavine in the rice grain has been examined by physical and chemical methods. There seems little doubt that the vitamins of rice, concentrated largely in the germ, are diffused to a great extent into the main body of the grain and are thus retained when the rice is milled. Further tests have shown that the main loss of vitamin during the cooking of white rice occurs during the washing process and that there is little further loss when excess cooking water is used and discarded. The systematic investigation of certain nutrients in different varieties of rice is being continued. Preliminary work is being done on the chromatographic separation of the amino-acids in rice. This method when fully developed should prove a useful tool for investigating certain nutritional problems in the Federation.

From the routine work of the division arises further evidence of the relative high frequency of diabetes among Indians compared with other races. Nearly half of about one hundred diabetic patients examined during the year were Indians, though Indians comprise only about one-sixth of the population of Kuala Lumpur and district.

80. ENTOMOLOGY.—Field investigations on DDT and BHC (Gammexane) have been continued and extended in the Division of Entomology. It appears that single doses of DDT at 200 mgm per square foot, or BHC at 40 mgm gamma insomer per square foot, remain effective in houses for about six months against *Anopheles maculatus*, our principal malaria carrier. House spraying against this mosquito twice a year should hence be sufficient. Gammexane (BHC) seems to kill all mosquitoes, but against many culicine mosquitoes the effect is not lasting: DDT on the other hand, though it does not kill culicines, continues for a long time to drive them out of houses by its irritant effect, and prevents many from biting. These insecticides are also being tried against the other important vectors of malaria and against the vectors of filariasis. The results so far indicate a wide range of reactions to DDT. *Anopheles letifer* is not readily killed: *A. barbirostris* (dark winged) and *sundaicus* are killed at first, but when the deposit of DDT is more than three weeks old,

50 per cent. or less succumb. *A. umbrosus* and the vectors of filariasis (Mansonia species) are susceptible. Further work along these lines is needed, especially to determine how long the insecticides remain effective against the various species, but it seems that *A. maculatus* may prove to be the most susceptible Malayan vector.

A wealth of information is being collected at the Tampin malaria branch of the Institute on those aspects of mosquito biology which have a practical importance now that insecticides are directed against the adult insects. Serious gaps in our knowledge are being filled. We now know, for example, where *A. maculatus* and other anophelines rest by day, and can collect them in their outdoor hiding places among vegetation. From mosquitoes caught in this and other ways, we are learning what proportion are likely to bite man or cattle under a given set of conditions, and how their innate biting behaviour is related to their reluctance or inclination to enter houses. It seems that, with the exception of *Culex fatigans*, cattle are more attractive than man to most of the common mosquitoes, including *A. maculatus*, although this species will more readily enter houses and bite man than will harmless species such as *A. vagus* or *philippinensis*. This being so, it has not been surprising to find that in the valleys in Negri Sembilan, where field experiments in rural malaria control with DDT or BHC are in progress and where there are many buffaloes, spraying the houses with these insecticides has by no means eliminated *A. maculatus*, although there has been some reduction in the numbers caught, and apparently also in the transmission of malaria.

As a larvicide, DDT in oil has been shown to be effective and extremely economical on still water, and is now in routine use in the Kuala Lumpur area. Present efforts are directed to finding a means of using it on flowing water against *A. maculatus*, where the difficulty is to get an effective distribution on the breeding places of this species. The Colonial Insecticides Committee in London have undertaken to try and produce a special low volume sprayer for the purpose, and meanwhile experiments are being continued here. These show that emulsification of the DDT/oil solution may be a feasible way out of the difficulty, and that emulsions are much superior to wettable powders for this purpose. The routine use of DDT as a larvicide on flowing water would be an important economy.

81. MALARIA.—The Malaria Research Division has continued the experimental testing of anti-malarial drugs in hospital patients, an activity which has continued for over twenty years, interrupted only during the Japanese occupation. The drugs under trial were proguanil (Paludrine) Camoquin, Chloroquine, and its German prototype Resochin. Attempts are being made to define the conditions which favour the emergence of the proguanil-resistant parasites first observed by the Division last year.

Experimental work on the chemoprophylaxis of malaria on estates is at a low ebb, but a watch is being kept for the appearance of proguanil-resistance on an estate where the drug has been given continuously for nearly four years. The studies reported from the Institute last year on the control of malaria in *kampongs* by house-spraying with the insecticides DDT and BHC (Gammexane), have proceeded smoothly. Much of the time and resources of the divisional staff are taken up with this work, involving as it does the individual examination of over 3,000 persons twice a year, and the fortnightly blood examination of some 250 infants dwelling in scattered *kampongs* throughout four of the rice-growing valleys of Negri Sembilan. There is some evidence of a reduction of malaria in the kampongs under observation, but the incidence of the disease in the country as a whole has again been low, and accurate assessment of results is therefore difficult.

82. NUTRITION.—An interesting finding has emerged from the feeding experiments which the Division of Nutrition is making in the Settlement of Malacca. A disease condition generally regarded as due to a deficiency of riboflavin, a member of the B2 vitamin complex, has been recognised in persons whose diet was rich in this vitamin. The explanation of this anomalous finding is not yet clear. The Division has made a dietary and economic survey in a coconut-growing area on the Selangor coast. The Malay peasants in this area were little better off than peasants examined elsewhere, and there were some households on a bare subsistence level. The effects of supplementing the diet of the school children with a school meal were studied. A dietary survey among recruits for the Malayan Police showed the marked improvement in health and physique from training and better food. These recruits eat much more than the peasant and the fisherman. A preliminary report on this important work, already distributed in mimeographed form, is shortly to be published.

The feeding of infants has received attention by the Division. Among some groups of the community there are local customs which have a lasting harmful effect on the health of the child. Rice, "that which strengthens a thousand times", may be fed to Malay infants a few days old, and the diet of the mother may be restricted after delivery; customs which may modify the composition of the infant's diet far from that of the mother's milk.

The Division maintains records of dietary deficiency diseases treated in the hospitals of the Federation. The general incidence of deficiency disease is slightly lower than in any comparable period since the end of the war, with one notable exception—there is a slight, but possibly significant increase in beri-beri. For most of 1950 under-milled rice was cheaper than highly-milled rice and the poor man ate the former. The position has now changed, the over-milled product being cheaper. The poor man can afford little else but rice and his diet becomes unbalanced to the extent of the chang-over. The position will need to be carefully watched. Infants are very susceptible to beri-beri and may die suddenly from the disease with few of the well-known signs. For this reason the trends in the infant mortality rate may be a useful early indication of approaching danger levels of deficiency.

83. SCRUB TYPHUS RESEARCH UNIT.—The discovery of Chloromycetin has robbed scrub typhus of the dangers for which it was so feared in the past, but the disease still needs expensive hospital treatment and puts a worker out of action for several weeks. The Scrub Typhus Research Team, supported entirely

by a Colonial Development and Welfare Grant, is investigating how patches of ground become dangerous and, since rats are closely involved, is studying the life history of the Malayan forms of these ubiquitous pests.

Recent work has shown that colonies of scrub-typhus infected mites occur in virgin forest and it is probable that they are maintained by a native forest rat—Muller's Giant Rat. When the forest is cut down and the cleared land is neglected, infected colonies, maintained by the more numerous introduced field-rats, enlarge and spread until areas of dangerous size and intensity develop. Detailed experiments are in hand at present to discover how far rats travel and how long they live, and hence how far and how frequently they spread the mites abroad. Results at present indicate that any one rat spends most of its life within about 50 yards of its nest.

A reliable mite-breeding technique has now been perfected. Many larval mites have been bred through to the adult stage in order that the two stages may be correlated in different species. The important vector mites have been bred through many generations and experiments on the ability of these mites to take up infection from rats and to transmit infection to their offspring are being conducted in conjunction with the Division of Pathology. These experiments are far from complete, but they indicate that the proportion of mites which become so infected is unexpectedly small.

In countries with more pronounced seasons, scrub typhus is a seasonal disease. The irregular fluctuations of the Malayan climate make it possible to analyse the effects of individual climatic factors, and these studies are being made on a wide front, helped by comparable collections of mites from Hong Kong, Sarawak, the Nicobar Islands, Singapore and Klang. Collaboration with Mr. H. Womersley of the South Australian Museum has continued and during the year no less than twenty-nine new species of mites have been discovered, including a new species of the *Trombicula akamushi* group which has been shown by our American colleagues to be infected. A survey of the endoparasites of Malayan rats has begun in conjunction with the University of Malaya.

In January a party from the unit, accompanied by the Forest Botanist, Mr. Wyatt-Smith, visited the small uninhabited island of Jarak in the Straits of Malacca. On this island the extreme conditions of a large infected mite population borne upon a dense colony of rats provide a ready-made experiment in the maintenance of mite-populations. Later in the year two assistants of the unit, and one from the visiting American team, visited Sarawak to make collections of mites and their hosts and accompanied Mr. Tom Harrison, Curator of the Sarawak Museum, on an expedition into the interior.

The Colonial Development and Welfare Grant for research into the ecology of the vector of scrub typhus expired in April of this year. It has been given a preliminary extension to the end of the year while details of a further extension are being discussed.

84. Pathology.—Towards the end of 1949 the scope of the Division of Pathology was extended to include a small section for the study of virus diseases. Satisfactory progress has been made. Using the chick embryo technique, the Division is now

able to cultivate certain of the viruses, and hospitals are beginning to make use of the facilities for diagnosis in virus disease which are slowly being developed. A promising laboratory test for smallpox, based on the well-known principle of haemagglutination inhibition has been developed. A change in the technique of preparing canine rabies vaccine is under trial. Recent American work suggests that an efficient vaccine can be prepared from virus grown in the chick embryo. The first batch of vaccine prepared by this method from the Fleury strain of virus is ready for trial in conjunction with the Veterinary Department.

Work on haemagglutination using tuberculin sensitised cells has been undertaken with a view to assessing its diagnostic value in early and active cases of tuberculosis. Rapid methods of growing tubercle bacilli in culture media and in the chorioallantoic membrane of chick embryos are under investigation at the Perak branch of the Institute.

The investigation into the racial distribution of cancer continues: suggestive differences in site incidence are becoming apparent although larger numbers are needed before definite conclusions can be drawn. Two interesting observations have come from material submitted by the Veterinary Department. A nutritional osteoporosis in horses was found to be the result of an unbalanced diet; and a severe infestation of the pancreas of cattle with the fluke (Eurytrema pancreaticum) was found to produce fibrosis and atrophy, with pancreatic insufficiency and gross malnutrition.

85. Filariasis Enquiry.—Steady progress has been made with the investigation on the distribution, transmission and treatment of filariasis, started by the Divisions of Entomology and Malaria Research two years ago. Visits have been made to endemic areas of the disease in Kedah, Province Wellesley, Penang Island and Pahang. Patients examined in Kedah one year after treatment with Hetrazan showed an improvement in their physical condition. A survey of the population of Pahang Tua, at the mouth of the Pahang River, revealed the extraordinarily high infection rate of 51 per cent. (315/619) a rate which is even higher than was found in the same area in 1937. Advice was given on the possibilities of controlling the disease. The treatment of cases with Hetrazan has now begun in Kuantan hospital.

86. Haematological Enquiry.—Early in 1950 a start was made with a hæmatological survey among various communities from rural and urban areas. The enquiry has two objects: firstly, to get an overall picture of the differences in hæmoglobin levels in the various social and racial groups, and secondly to discover what proportion of the people with severe anæmia were suffering from nutritional megaloblastic anæmia. The thousand or so persons examined so far include Malays, Tamils and Senoi and Negrito-Senoi aborigines, and observations on the families of Chinese squatters are beginning. The work is at an early stage and it would be unwise to draw premature conclusions. There is undoubtedly a high degree of iron-deficiency anæmia but, contrary to the prevailing view, macrocytic nutritional anæmia was rare. only two cases having been recognised in the series. A good beginning has been made with this work but quicker progress is likely with the expected arrival shortly of a research hæmatologist.

87. The U.S. Army Medical Research Team.—A third medical research team from the Virus and Rickettsial Diseases Section of the U.S. Army Research and Graduate School, Washington, was attached to the Institute from February 15th to July 9th. The team was led by Major R. Traub, who was assisted by Captain H. L. Ley, Captain L. P. Frick, Lieut. F. H. Diercks and Lieut. V. Tipton. Circumstances restricted the ground the team was able to cover in a wide programme of research which included trials of the new antibiotic terramycin in typhus fever, Aureomycin in amœbic dysentery, combined treatment with Cortisone and Chloromycetin in typhoid fever, the immunity response after induced typhus infection, and the recovery of the organisms of the disease from a variety of forest mites and hosts. The results of this work will appear in American medical journals and will be communicated in due course to the Malayan Medical Services. This valuable liaison with American workers is a most welcome development in current research policy.

88. Routine Activity.—The Institute maintains a diagnostic and advisory service for the Federation of Malaya and manufactures biological products which are distributed throughout the peninsula and as far afield as Burma. In the Kuala Lumpur and Ipoh laboratories 73,033 laboratory examinations were made during the year for the medical services and for private practitioners. Prophylactic vaccines prepared include 1,575,000 doses of vaccine lymph, 86,650 cc of typhoid vaccine, 48,250 cc of cholera vaccine and 51,400 cc of vaccine for human and canine rabies for prophylaxis.

Rabies.—The smouldering post-war enzootic of rabies in northern Malaya, a legacy of the Japanese occupation, is not yet under control. Brains from 229 suspected animals, mostly from Kedah, Perak and Kelantan, were examined and 125 animals proved to be rabid. A vaccination campaign among dogs, using the new chick-embryo vaccine prepared from the Fleury strain of virus is planned by the Veterinary Department when vaccine becomes available.

Yellow Fever.—Vaccine for yellow fever prophylaxis is not prepared in Malaya but bought from the South African Institute for Medical Research in Johannesburg. Regular assays of potency are necessary, however, to meet international obligations. The Institute is recognised by the World Health Organisation as a centre where the standard potency tests, performed on groups of mice, may be done, and 23 batches of vaccine were so tested during the year. There are three centres for yellow fever inoculation in Malaya—Singapore, Kuala Lumpur and Penang.

Smallpox vaccination.—The demand for vaccine lymph remains high—1,652,270 doses during 1950. The Lymph Station has, in addition, met a considerable demand from the Burma Government: 195,000 doses were sent to Burma during the year, and a further demand of nearly a million doses is anticipated over the next twelve months.

Training of Technicians.—Nine technicians from the Medical Department and elsewhere have received training in the laboratories during the year. A scheme whereby laboratory assistants of the Medical Department receive three years probationary training in the Institute is planned but is not yet in operation.

89. LEPER SETTLEMENTS.—There are three leper settlements in the Federation: Sungei Buloh in Selangor with 2,222 inmates; Pulau Jerejak in Penang with 403 and the leper hospital at Johore Bahru with 392—making a total of 3,017 patients in leper institutions at the end of the year.

Sungei Buloh Settlement is situated in a valley some 16 miles from Kuala Lumpur in attractive surroundings. Part of the settlement is laid out as a hospital with wards for the treatment of the acute cases, and the rest is a village settlement consisting of small semi-detached houses each with one room, a kitchen, a verandah and a bathroom. Married couples who have been admitted to the settlement are allowed to live together and a number of marriages take place each year amongst the settlement inmates. About forty infants are born each year in the Settlement and these are removed as soon as possible to a creche' in the uninfected area where they are looked after till they are adopted or taken care of by the social welfare organisations.

LEPER SETTLEMENT, SUNGEI BULOH.

During the year the number of patients in the settlement increased from 2,130 to 2,222: the distribution of the population is:

	Men.	Women.	Boys.	Girls.	Total.
Chinese	1,076	488	114	75	1,753
Indians	196	24	10	4	234
Malays	164	43	13	2	222
Others	9	3	—	1	13
Total	1,445	558	137	82	2,222

90. Treatment has progressed in a very encouraging manner. Over 1,800 patients are receiving sulphones in one form or another.

The following drugs are being used for treatment of leprosy: 20 per cent. oily suspension of 4:4 diaminodiphenyl sulphone, sulphetrone both oral and aqueous solution, and p-acetylamino benzyldehyde thiosemicarbazone.

Both sulphone and sulphetrone are producing equally good results. Clinical improvement is rapid but bacteriological improvement is rather slow.

The thiosemicarbazone is a recent introduction and a small group of 17 cases are being treated with it. So far the results are encouraging but it is too early to give a definite opinion.

HOSPITAL TREATMENT IN THE LEPER SETTLEMENT, SUNGEI BULOH.

There were 1,585 admissions to hospital for treatment. The main cause of death apart from the leprosy factor was pulmonary tuberculosis which accounted for seven deaths out of a total of 54.

The general morale of the Settlement is high: the improvement in the appearance of the patients as a result of treatment has had a very good effect.

Welfare work in all the leper establishments was actively carried on during the year. The patients themselves take an active part in entertainments, gardening and in staffing and running the institutions.

91. MENTAL HOSPITALS.—The Mental Hospital at Tampoi, Johore Bahru, is still leased to the Army but arrangements have been made with the military authorities to vacate completely before the end of the year.

It is proposed to re-open the Mental Hospital on January, 1951.

The Central Mental Hospital at Tanjong Rambutan deals with all cases of mental disease from the Federation of Malaya. With regard to the new 1,000 bed hospital, the Veterinary Department still occupies one ward. The four first class rooms (two males and two females) continue to be fully occupied. The number of patients on December 31st, 1950, was 3,081 as compared with 2,750 at the end of the previous year, an increase of 331.

92. The admissions during the year were 2,208 compared with 2,132 in the previous year. There were 1,487 discharges, graded as recovered 888, relieved 476 and 123 not improved. Deaths numbered 381 as against 307 in 1949, giving a death rate of 7.68 over the 4,958 cases treated.

Occupational therapy was carried on as in the previous year. Deep insulin and electric convulsive therapy continued to be used with many dramatic recoveries. Of the former 155 cases were treated and of the latter 1,015, as compared with 137 and 803 in 1949.

93. CENTRAL MENTAL HOSPITAL, TANJONG RAMBUTAN.—RETURN OF INMATES FOR THE YEAR 1950.

Summary of Nationalities.

	Remaining at end of December, 1949.	Admissions.	Deaths.	Total treated	Remaining at end of December, 1950.
Europeans ...	—	7	—	7	—
Eurasians ...	13	11	2	24	16
Chinese ...	1,718	1,255	255	2,973	1,910
Indians ...	371	420	39	791	411
Malays ...	641	506	83	1,147	735
Japanese ...	1	—	—	1	1
Others ...	6	9	2	15	8
Total ...	2,750	2,208	381	4,958	3,081

Summary of Sex.

	Remaining at end of December, 1949.	Admissions.	Deaths.	Total treated	Remaining at end of December, 1950.
Men ...	1,801	1,553	269	3,354	2,033
Women ...	930	642	106	1,572	1,027
Children (under 10 years) ...	19	13	16	32	21
Total ...	2,750	2,208	381	4,958	3,081

Daily average number of inmates for 1950—2,925

Number of beds—3,000

94. The cost of maintaining the Mental Hospital is indicated below:

(i)	Personal Emoluments	$ 380,193.00
(ii)	Clerical Service	14,010.00
(iii)	Other Charges, Annually Recurrent ...	794,015.00
(iv)	Other Charges, Special Expenditure ...	47,040.00
(v)	Miscellaneous Services	231,609.00
	TOTAL ...	$1,466,867.00

Capital expenditure, pension and leave charges are not included. The nett maintenance cost is $501.49 per annum per patient treated.

95. FARMS.—The situation during 1950 was very satisfactory. The number of patients working on the farm at the end of the year was 278, as compared with 286 in 1949. Stocks of pigs have been maintained and now number 336. More acreage of bananas and pineapples have been planted.

The estimated value of farm produce at market prices was $123,571.50 as compared with $144,903.06 in 1949. The main items produced were 9,871 katties of pork, 5,130 katties of maize, 4,027 coconuts, 101,100 katties of sweet potatoes and 468,010 katties of vegetables (1 katty=1⅓ lbs.).

GOVERNMENT MEDICAL STORES.

96. The store position is still rendered difficult by the need to use several separate buildings in widely scattered localities. Concentration at the port of entry, when it becomes practicable, could reduce costs and increase efficiency. The supply position has improved during the year.

Stock-pricing.—Every effort was made to keep all issue prices at the lowest possible level in relation to quality, in order that States could procure maximum quantities at the cheapest price.

97. PHARMACEUTICAL LABORATORY.—The last of the equipment ordered in 1946, together with further equipment ordered in subsequent years, arrived at the end of the year.

This equipment included a mixing/sifting machine an ointment mill, and an extraction distillation plant. The ampoule filling room was fitted with a small air-conditioning unit and working conditions therein are now satisfactory.

Over 143,000 ampoules were made compared with 110,000 in 1949 and 56,319 lbs. of galenicals and other preparations as compared with 65,500 in 1949.

The production of sulphone preparations for the treatment of leprosy was raised to 449,850 and 921,808 doses of other preparations for injection were produced.

ORTHOPAEDIC APPLIANCE CENTRE.

98. Although comparatively unknown to most people in the Federation, the Centre was kept busy throughout the year with demands not only from the Federation and Singapore, but also from Siam and from His Majesty's Forces in the Far East. Enquiries have also been received from Sarawak and Ceylon.

In spite of working under difficult conditions, the Centre has served the needs of many physically handicapped people, and has given them the chance of independence where in the past, their lives have been a burden to their families or to welfare institutions.

Artificial limbs and other appliances have been available in the past only from overseas; but they can now be supplied more quickly and more cheaply, with the added advantage of accurate "on the spot" fitting.

In 1950, the staff consisted of the Superintendent with seven appliance makers, five improvers, two clerks, one store-keeper and six servants.

The work produced in 1950 included 60 articulated legs and arms, 15 "peg legs", 19 tuberculosis frames, 19 walking callipers, 18 pairs surgical boots, 12 spinal jackets and over 200 metal splints and other appliances.

The Centre has also been successful in the manufacture of plastic fingers, noses, ears and other parts, and there is evidence of a growing desire for such prosthesis among those in need of it. The service is particularly valuable in view of the fact that plastic surgery is comparatively unknown in this country.

CONCLUSION.

99. Malaya has been fortunate since the end of the war in the low incidence of malaria and of the other diseases that follow in its trail. Tuberculosis, the high infantile mortality rate, the improving but still relatively low standards of nutrition are only some of the problems which remain to be solved.

On the other hand progress is being made with the introduction of sulphone drugs for the treatment of leprosy, and the discovery of chloramphenicol (chloromycetin) as a powerful therapeutic agent in the treatment of tropical typhus. There is also an increasing demand for modern medical treatment amongst all classes of the community.

Throughout the year there was a gradual reduction in the number of senior grades of staff. The position as regards Medical and Health Officers had reached almost a breaking point by the end of the year. In an endeavour to use the task of the overworked Medical Officers, Government approved the principle of engaging part-time Medical Practitioners on a paid sessional basis. It must not, however, be considered to be the answer to our problem.

Although the aim is to build up a staff consisting largely of local men and women, great difficulty is experienced due to shortage of trained staff.

Table 1.

IN-PATIENTS.

Return of Diseases and Deaths for the Year 1950.

(All Hospitals including Special Institutions.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
I.—INFECTIOUS AND PARASITIC DISEASES.					
1. Typhoid fever	74	773	847	91	67
2. Paratyphoid fevers—					
(1) Paratyphoid A	1	13	14	..	4
(2) Paratyphoid B	..	1	1		
(3) Paratyphoid C typed salmonella infections	..	1	1		
(4) Paratyphoid fever (undifferentiated or other)	1	9	10	2	1
3. Plague—					
(1) Bubonic					
(2) Pneumonic					
(3) Septicæmic					
(4) Undefined					
4. Cholera					
5. Undulent fever (brucellosis)					
6. Cerebro-spinal (meningococcal) meningitis	..	9	9	4	1
7. Malignant pustule and anthrax					
8. Scarlet fever					
9. Whooping cough	4	191	195	5	18
10. Diphtheria	25	821	846	226	26
11. Erysipelas	1	35	36	1	
12. Tetanus—					
(1) Tetanus of the newly-born	..	205	205	162	3
(2) Other forms of tetanus	11	186	197	85	3
13. Tuberculosis of the respiratory system	2,328	6,305	8,633	1,767	2.460
14. Tuberculosis of the meninges and central nervous system	10	193	203	158	9
15. Tuberculosis of the intestines and peritoneum	2	51	53	13	4
16. Tuberculosis of the vertebral column	51	179	230	13	67
17. Tuberculosis of other bones and joints	49	199	248	8	59
18. Tuberculosis of the skin and subcutaneous cellular tissue	3	29	32	8	5
19. Tuberculosis of the lymphatic system	4	129	133	4	21
20. Tuberculosis of the genito-urinary system	1	16	17	2	
21. Tuberculosis of other organs—					
(1) Adrenal	..	6	6		
(2) Other sites	5	25	30	3	2
22. Disseminated tuberculosis—					
(1) Acute	..	1	1	1	
(2) Chronic	..	2	2	2	
(3) Not distinguished as acute or chronic	..	13	13	1	
23. Leprosy—					
(1) Lepromatous	133	74	207	8	151
(2) Other forms	2,786	556	3,342	80	2,929
24. Purulent infection and septicæmia—					
(1) Septicæmia or pyæmia	..	112	112	69	2
(2) Gas gangrene	..	1	1		
(3) Generalised infection by bacillus coli					
25. Gonococcal infections—					
(1) Of genito-urinary system	16	881	897	2	17
(2) Of eyes	2	94	96	..	2
(3) Of joints	7	137	144	..	7
(4) Other sites or unspecified	19	207	226		
26. Other bacterial diseases (dysentery excepted)—					
(1) Glanders					
(2) Tularæmia					
(3) Others including melioidosis					
Carried forward	5,533	11,454	16,987	2,715	5,858

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	5,533	11,454	16,987	2,715	5,858
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)					
27. Dysentery—					
(1) Bacillary	4	201	205	13	7
(2) Amœbic	46	1,136	1,182	43	31
(3) Other protozoal dysentery	..	9	9	1	
(4) Other or unspecified forms of dysentery including mixed infections ..	12	329	341	22	8
28. Malaria—					
(1) Benign tertian	40	1,934	1,974	18	37
(2) Quartan	4	73	77	3	1
(3) Subtertian	102	5,080	5,182	165	73
(4) Blackwater fever	1	7	8	3	
(5) Type unspecified, including cachexia	166	7,472	7,638	142	152
29. Other diseases due to parasitic protozoa, except spirochætes—					
(1) Trypanosomiasis ..					
(2) Kala azar, leishmaniasis, coccidiosis					
30. Syphilis—					
(1) Of the central nervous system other than G.P.I.	..	9	9	1	2
(2) General paralysis of the insane	..	25	25	1	1
(3) Aneurism of Aorta ..	1	15	16	2	1
(4) Congenital syphilis ..	6	129	135	21	5
(5) Syphilis, primary	11	280	291	..	9
(6) Syphilis, any form, with gonorrhœa	..	19	19		
(7) Syphilis, secondary ..	76	1,003	1,079	5	47
(8) Syphilis, tertiary	38	338	376	19	24
(9) Syphilis, other forms, or type not stated	14	225	239	4	22
31. Relapsing fever					
32. Other diseases due to spirochætes—					
(1) Spirochætosis ictero-hæmorrhagica (weil's disease)	..	6	6	3	2
(2) Yaws	103	851	954	..	61
(3) Spirochætal stomatitis, vincent's angina ..					
(4) Broncho-pulmonary spirochætosis ..					
33. Influenza—					
(1) With respiratory complications	16	531	547	1	9
(2) With non-respiratory complications	6	1,145	1,151	1	9
(3) Without complications ..	98	4,628	4,726	2	71
34. Smallpox					
35. Measles	8	554	562	4	5
36. Acute poliomyelitis and polio-encephalitis	3	32	35	3	4
37. Acute infectious encephalitis (lethargic or epidemic)—					
(1) Acute lethargic (or epidemic) encephalitis	..	1	1		
(2) Sequelæ of encephalitis lethargica					
38. Other diseases due to viruses—					
(1) Yellow fever					
(2) Rabies	..	1	1	1	
(3) Herpes zoster	3	110	113	..	3
(4) German measles (rubella)	..	2	2		
(5) Varicella (chicken-pox) ..	18	451	469	..	32
(6) Dengue	8	56	64		
(7) Others	..	23	23	..	3
Carried forward ..	6,317	38,129	44,446	3,193	6,477

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	6,317	38,129	44,446	3,193	6,477
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)					
39. Typhus and typhus-like diseases (rickettsioses)—					
(1) Exanthematic typhus fever					
(2) Tropical typhus (urban)	2	86	88	1	1
(3) Tropical typhus, scrub typhus, Japanese river fever	11	346	357	5	9
(4) Other rickettsia infections					
40. Ankylostomiasis	54	1,719	1,773	3	44
41. Hydatid disease	..	13	13		
42. Other diseases due to helminths—					
CESTODES:					
(1) Tænia solium, t. saginata, and other tapeworms	..	3	3		
(2) Other cestodes	..	5	5		
NEMATODES:					
(3) Ascariasis, roundworms	45	3,038	3,083	16	53
(4) Filariasis	6	142	148	..	4
(5) Trichuris trichiura ..	1	1	2		
(6) Oxyuris vermicularis ..	..	14	14		
(7) Dracunculus medinensis					
TEMATODES:					
(8) Schistosomum japonicum					
(9) Clonorchis sinensis ..					
(10) Other helminths ..	8	188	191	1	1
43. Mycoses—					
(1) Of the mouth	..	1	1	1	
(2) Of the skin, including tinea	22	151	173	..	2
(3) Actinomycosis	..	2	2		
(4) Other mycotic conditions	..	5	5		
44. Other infective or parasitic diseases—					
(*a*) Venereal diseases other than syphilis and gonorrhœa—					
(1) Soft chancre ..	2	197	199	..	6
(2) Bubo	12	187	199	..	1
(3) Granuloma venereum	..	32	32		
(4) Other venereal diseases	..	17	17	..	3
(5) Balanitis (non-venereal)	..	5	5		
(*b*) Pernicious lymphogranulomatosis (Hodgkin's disease)	1	15	16	2	
(*c*) Mumps	9	51	60		
(*d*) Glandular fever	1	7	8		
(*e*) Myiasis					
(*f*) Other infective or parasitic diseases not specified	..	205	205	2	
II.—CANCER AND OTHER TUMOURS.					
45. Cancer of the buccal cavity and pharynx—					
(1) Lips	1	9	10	4	
(2) Tongue	..	5	5	1	
(3) Other parts of the mouth and pharynx ..	9	122	131	19	6
Carried forward ..	6,496	44,695	51,191	3,248	6,607

Table 1—(*cont.*)

IN-PATIENTS—(*cont.*)

Return of Diseases and Deaths for the Year 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	6,496	44,695	51,191	3,248	**6,607**
II.—CANCER AND OTHER TUMOURS—(*cont.*)					
46. Cancer of the digestive organs and peritoneum—					
(1) Oesophagus	2	21	23	4	
(2) Stomach and doudenum	3	155	158	74	7
(3) Intestines	..	11	11	6	
(4) Rectum	2	15	17	8	
(5) Liver and biliary passages	2	170	172	86	5
(6) Pancreas	..	3	3	1	
(7) Peritoneum	..	2	2	1	
(8) Other or unspecified digestive organs ..	3	75	78	26	1
47. Cancer of the respiratory system—					
(1) Larynx and trachea ..	2	29	31	18	1
(2) Lungs and pleura ..	1	37	38	18	
48. Cancer of the uterus	7	85	92	18	
49. Cancer of other female genital organs	3	160	163	29	7
50. Cancer of the breast	2	63	65	6	4
51. Cancer of the male genital organs	1	43	44	10	
52. Cancer of the urinary organs ..	1	5	6	1	
53. Cancer of the skin (scrotum excepted)	5	98	103	7	6
54. Cancer of brain and other parts of the nervous system					
55. Cancer of other or unspecified organs	13	206	219	81	9
56. Non-malignant tumours—					
(1) Of female genital organs ..	1	50	51	1	
(2) Of other sites	17	466	483	12	10
57. Tumours of undetermined nature—					
(1) Of female genital organs	..	21	21	..	1
(2) Of other sites	1	111	112	8	6
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS, OTHER GENERAL DISEASES AND VITAMIN DEFICIENCY DISEASES.					
58. Rheumatic fever—					
(1) With cardiac involvement	3	82	85	14	8
(2) Without cardiac involvement	11	185	196	3	6
59. Chronic Rheumatism and other rheumatic diseases—					
(1) Rheumatoid arthritis ..	10	262	272	2	10
(2) Other chronic articular rheumatism	4	136	140	1	7
(3) Fibrositis and other forms of rheumatism	12	569	581	1	19
60. Gout	..	29	29		
61. Diabetes mellitus	47	557	604	30	42
62. Diseases of the pituitary gland	..	4	4		
63. Diseases of the thyroid and parathyroid glands—					
(1) Simple goitre	6	69	75	..	3
(2) Exophthalmic goitre ..	1	31	32	4	2
(3) Myxœdema, and cretinism	1	5	6		
(4) Other diseases of the thyroid gland ..	2	111	113	2	5
(5) Diseases of the parathyroid glands, including tetany ..	1	9	10	2	1
Carried forward ..	6,660	48,570	55,230	3,722	6,767

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	6,660	48,570	55,230	3,722	6,767
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS, OTHER GENERAL DISEASES AND VITAMIN DEFICIENCY DISEASES —(*cont.*)					
64. Diseases of the thymus (including status lymphaticus)					
65. Diseases of the adrenal glands (not specified as tuberculous)	..	4	4		
66. Other general diseases—					
(1) Osteomalacia	..	3	3		
(2) Sprue	..	20	20	..	3
(3) Acidosis	..	2	2		
(4) Other diseases of the metabolism	18	343	361	37	12
67. Scurvy—					
(1) Infantile scurvy					
(2) Other forms of scurvy ..	..	6	6		
68. Beri-beri—					
(1) Including epidemic dropsy	37	589	626	43	23
(2) Associated with pregnancy or labour	..	29	29	5	1
69. Pellagra	..	24	24		
70. Rickets	3	39	42	3	1
71. Other vitamin deficiency diseases	..	83	83	17	8
IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.					
72. Hæmorrhagic conditions—					
(1) Primary purpura	..	10	10	4	
(2) Hæmophilia	..	3	3		
(3) Others	..	5	5	5	
73. Anæmias—					
(1) Pernicious anæmia ..	1	46	47	9	1
(2) Other hyperchromic anæmias	..	23	23	1	
(3) Hypochromic anæmias including secondary anæmia	221	2,616	2,837	170	164
(4) Other anæmias	88	1,640	1,728	122	77
74. Leukæmias and aleukæmias—					
(1) Leukæmia	2	42	44	23	2
(2) Aleukæmia	..	1	1		
75. Diseases of the spleen—					
(1) Splenic anæmia	..	9	9	1	
(2) Others (not including diseases of the spleen due to malaria or leukæmia)	..	26	26	3	
76. Other diseases of the blood and blood-forming organs—					
(1) Agranulocytosis ..	1	8	9		
(2) Erythrocytosis					
(3) Others	..	15	15	4	1
V.—CHRONIC POISONING AND INTOXICATION.					
77. Alcoholism (acute or chronic) ..	3	246	249	4	2
78. Lead poisoning—					
(1) Occupational	..	8	8	1	
(2) Not occupational					
Carried forward ..	7,034	54,410	61,444	4,174	7,062

Table 1—(*cont.*)

IN-PATIENTS—(*cont.*)

Return of Diseases and Deaths for the Year 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	7,034	54,410	61,444	4,174	7,062
V.—CHRONIC POISONING AND INTOXICATION—(*cont.*)					
79. Chronic poisoning by other mineral and organic substances—					
(*a*) Occupational :					
(1) Arsenical dermatitis	2	59	61	2	4
(2) Arsenical poisoning, other forms ..	..	5	5	..	1
(3) Other occupational poisoning	2	22	24	3	
(*b*) Poisoning by narcotic and soporific drugs :					
(1) Opium	12	885	897	3	29
(2) Morphia	..	1	1		
(3) Others	1	32	33	1	4
(*c*) Other or unspecified poisoning (excluding food poisoning and suicide or homicide, actual or attempted) ..	..	25	25	3	
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.					
80. Encephalitis (non-epidemic)—					
(1) Cerebral abscess	..	26	26	16	
(2) Other forms of encephalitis	3	76	79	41	4
81. Meningitis (not including tuberculous meningitis or cerebro-spinal meningitis) ..	5	188	193	100	3
82. Diseases of the medulla and spinal cord—					
(1) Motor neurone disease	2	5	7	2	
(2) Subacute combined degeneration ..					
(3) Myelitis of unstated origin	1	9	10	3	1
(4) Others	10	45	55	7	8
83. Intracranial lesions of vascular origin—					
(1) Cerebral hæmorrhage ..	7	199	206	155	6
(2) Cerebral embolism, thrombosis and softening	13	147	160	62	18
(3) Hemiplegia and other paralysis of unstated origin	112	492	604	47	128
(4) Other intracranial effusions	9	14	23	4	5
84. Mental disorders and deficiency—					
(1) Mental deficiency ..	..	20	20	..	2
(2) Schizophrenia (dementia præcox)	2	8	10	1	2
(3) Maniac-depressive psycoses					
(4) Other mental disorders, including neurosis, neurasthenia, and delirium (not alcoholic)	8	172	180	2	3
85. Epilepsy	18	268	286	20	12
86. Convulsions in children (age under five years)	..	174	174	71	7
Carried forward ..	7,241	57,282	64,523	4,717	7,299

Table 1—(*cont.*)

IN-PATIENTS—(*cont.*)

Return of Diseases and Deaths for the Year 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	7,241	57,282	64,523	4,717	7,299
VI.—Diseases of the Nervous System and Sense Organs—(*cont.*)					
87. Other diseases of the nervous system—					
(1) Chorea	..	7	7		
(2) Neuritis and neuralgia	41	1,541	1,582	2	49
(3) Paralysis agitans ..	9	6	15	1	6
(4) Disseminated sclerosis	2	6	8	2	2
(5) Others	27	740	767	8	19
88. Diseases of the organs of vision—					
(1) Conjunctivitis	38	2,028	2,066	..	37
(2) Trachoma	7	138	145	..	15
(3) Corneal ulcer	10	415	425	..	17
(4) Other diseases of the eye	231	2,053	2,284	..	225
89. Diseases of the ear and of the mastoid antrum—					
(1) Otitis externa	2	178	180	..	2
(2) Otitis media	8	321	329	1	8
(3) Mastoiditis	4	78	82	5	1
(4) Others	4	131	135	1	6
VII.—Diseases of the Circulatory System.					
90. Pericarditis	4	28	32	9	2
91. Acute endocarditis—					
(1) Acute or subacute bacterial endocarditis	..	5	5	2	
(2) Others	2	40	42	15	1
92. Chronic affections of the valves and endocardium—					
(1) Aortic valve disease ..	3	84	87	19	5
(2) Mitral valve disease ..	26	384	410	91	20
(3) Other valvular diseases	4	67	71	15	6
(4) Unspecified valvular lesions or endocarditis	3	55	58	14	7
93. Diseases of the myocardium—					
(1) Acute myocarditis ..	9	197	206	73	9
(2) Chronic myocarditis, rheumatic	1	26	27	11	1
(3) Myocardial degeneration, and other forms of chronic myocarditis ..	20	358	378	120	18
(4) Others	..	12	12	4	
94. Diseases of the coronary arteries, angina pectoris—					
(1) Coronary disease with myocardial degeneration	1	11	12	7	
(2) Coronary disease without myocardial degeneration	1	32	33	15	6
(3) Angina pectoris without mention of coronary disease	..	19	19	1	
95. Other diseases of the heart—					
(1) Functional diseases without organic lesion ..	1	54	55	11	10
(2) Others	19	700	719	283	40
96. Aneurism (except of heart and aorta)	1	33	34	6	2
97. Arteriosclerosis (excluding coronary or renal sclerosis or cerebral hæmorrhage) ..	11	46	57	12	9
Carried forward ..	7,730	67,075	74,805	5,445	7,822

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	7,730	67,075	74,805	5,445	7,822
VII.—DISEASES OF THE CIRCULATORY SYSTEM—(*cont.*)					
98. Gangrene	9	51	60	4	5
99. Other diseases of the arteries ..	..	27	27	5	3
100. Diseases of the veins—					
(1) Varicose veins	5	59	64	..	5
(2) Hæmorrhoids	21	844	865	1	18
(3) Phlebitis	6	73	79	1	2
(4) Thrombosis	..	30	30	1	2
(5) Air embolism					
(6) Others	..	23	23	..	1
101. Diseases of the lymphatic system—					
(1) Abscess, bubo (non-specific), adenitis ..	4	341	345	..	14
(2) Lymphadenitis ..	20	529	549	2	11
(3) Others	4	226	230	2	3
102. High blood pressure (idiopathic)	32	466	498	78	20
103. Other diseases of the circulatory system—					
(1) Low blood pressure ..	..	15	15		
(2) Epistaxis	1	28	29		
(3) Others, including hæmorrhage with unknown origin ..	1	40	41	2	2
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.					
104. Diseases of the nasal fossa and annexa—					
(1) Diseases of the nose ..	6	386	392	..	10
(2) Diseases of the accessory nasal sinuses ..	6	712	718	..	1
105. Diseases of the larynx—					
(1) Laryngitis	..	125	125	8	5
(2) Other diseases of the larynx	1	22	23	1	
106. Bronchitis—					
(1) Acute	48	2,818	2,866	13	53
(2) Chronic	84	1,682	1,766	55	76
(3) Not defined as acute or chronic	74	3,902	3,976	8	76
107. Broncho-pneumonia	44	2,369	2,413	832	54
108. Lobar-pneumonia	37	1,123	1,160	175	29
109. Pneumonia (unspecified) ..	22	734	756	147	20
110. Pleurisy—					
(1) Empyema	6	131	137	23	11
(2) Other pleurisy	25	441	466	21	33
111. Congestion, œdema, hæmorrhagic infarction and thrombosis of the lungs	1	71	72	20	2
112. Asthma	117	2,724	2,841	58	94
113. Pulmonary emphesema	3	44	47	12	4
114. Other diseases of the respiratory system—					
(1) Chronic interstitial pneumonia (including occupational disease of the lung)	..	2	2	1	1
(2) Gangrene of the lung ..	1	6	7	4	
(3) Abscess of the lung ..	7	81	88	15	5
(4) Others	14	891	905	30	25
Carried forward ..	8,329	88,091	96.420	6,964	8,407

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	8,329	88,091	96,420	6,964	8,407
IX.—DISEASES OF THE DIGESTIVE SYSTEM.					
115. Discases of the buccal cavity and annexa and of the pharynx and tonsils—					
(1) Pyorrhœa	3	141	144	1	3
(2) Dental caries	5	404	409	..	9
(3) Other diseases of teeth and gums	..	211	211	1	9
(4) Infections of the throat	..	131	131	4	
(5) Diseases of the tonsils	20	1,273	1,293	5	18
(6) Others	22	833	855	8	6
116. Diseases of the œsophagus—					
(1) Ulceration	..	5	5	3	
(2) Stricture or obstruction ..	2	31	33	5	1
(3) Others	..	43	43	2	2
117. Ulcer of the stomach or duodenum—					
(1) Ulcer of the stomach ..	36	685	721	69	46
(2) Ulcer of the duodenum	12	159	171	11	10
118. Other diseases of the stomach—					
(1) Gastritis	53	1,963	2,016	6	59
(2) Others	23	969	992	2	21
119. Enteritis and diarrhœa—(under 2 years)	27	1,756	1,783	562	28
120. Enteritis and diarrhœa—(2 years and over)					
(1) Enteritis	10	1,175	1,185	103	41
(2) Colitis	14	503	517	31	17
(3) Others	33	1,400	1,433	65	15
121. Appendicitis	36	1,412	1,448	40	31
122. Hernia, intestinal obstruction—					
(1) Hernia without obstruction or strangulation ..	27	899	926	4	38
(2) Hernia with obstruction or strangulation ..	3	181	184	32	5
(3) Intussusception	..	4	4	2	
(4) Other forms of intestinal obstruction	5	119	124	61	3
123. Other diseases of the intestines—					
(1) Diverticulitis	..	7	7	1	
(2) Constipation, intestinal stasis	6	518	524	1	4
(3) Fissure or abscess of rectum or anus ..	2	85	87	1	2
(4) Others	18	745	763	14	12
124. Cirrhosis of the liver	20	398	418	87	25
125. Other diseases of the liver—					
(1) Acute yellow atrophy (not associated with pregnancy)	..	18	18	5	
(2) Amœbic abscess and hepatitis	21	482	503	31	18
(3) Hepatitis (not amœbic) ..	19	343	362	35	13
(4) Others	17	325	342	35	21
126. Biliary calculi	5	38	43	1	1
127. Other diseases of the gall bladder and bile ducts—					
(1) Cholecystitis without record of calculi ..	5	175	180	3	6
(2) Others	6	128	134	11	7
128. Diseases of the pancreas (other than diabetes)	..	12	12	5	
129. Peritonitis, without stated cause	6	173	179	98	2
Carried forward ..	8,785	105,835	114,620	8,309	8,880

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(All Hospitals including Special Institutions)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	8,785	105,835	114,620	8,309	8,880
X.—DISEASES OF THE URINARY AND GENITAL SYSTEMS (NON-VENEREAL, AND NOT CONNECTED WITH PREGNANCY OR THE PUERPERIUM).					
130. Acute nephritis	27	424	451	76	29
131. Chronic nephritis..	34	425	459	99	28
132. Nephritis (undefined as acute or chronic)	31	442	473	55	31
133. Other diseases of the kidney and ureters—					
(1) Pyelitis	18	677	695	12	16
(2) Others	8	294	302	34	9
134. Calculi of the urinary passages—					
(1) Calculi of the kidneys and ureters	8	157	165	2	8
(2) Calculi of the bladder ..	5	118	123	1	8
(3) Calculi of unstated site	1	46	47	..	1
135. Diseases of the bladder—					
(1) Cystitis	7	406	413	4	13
(2) Others	7	101	108		
136. Diseases of the urethra, urinary abscess, etc.—					
(1) Stricture	10	282	292	2	11
(2) Others	7	358	365	1	3
137. Diseases of the prostate—					
(1) Hypertrophy	2	29	31	..	3
(2) Others	..	84	84	1	3
138. Diseases of other male genital organs—					
(1) Hydrocele	18	230	248	..	6
(2) Epididymitis, orchitis ..	9	261	270	1	5
(3) Others (excluding conditions due to venereal diseases, mumps or tuberculosis)	10	354	364	..	9
139. Diseases of the female genital organs—					
(1) Diseases of the ovary ..	6	154	160	3	7
(2) Diseases of the fallopian tube	2	184	186	..	7
(3) Diseases of the parametria	1	9	10	1	
(4) Diseases of the uterus	11	793	804	8	26
(5) Diseases of the breast	3	160	163	..	6
(6) Other diseases of the female genital organs	15	847	862	2	15
XI.—DISEASES OF PREGNANCY, CHILDBIRTH AND THE PUERPERAL STATE.					
140. Post-abortive infection	..	28	28	3	
141. Abortion without mention of septic conditions—					
(1) Hæmorrhage following abortion	4	482	486	2	15
(2) Abortion without record of hæmorrhage ..	27	1,524	1,551	1	33
142. Ectopic gestation	4	82	86	9	3
143. Hæmorrhage of pregnancy—					
(1) Placenta prævia	..	86	86	14	1
(2) Other and unspecified hæmorrhage of pregnancy	..	147	147	27	4
Carried forward ..	9,060	115,019	124,079	8,667	9,180

Table 1—(*cont.*)

IN-PATIENTS—(*cont.*)

Return of Diseases and Deaths for the Year 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	9,060	115,019	124,079	8,667	9,180
XI.—Diseases of Pregnancy, Childbirth and the Puerperal State—(*cont.*)					
144. Toxæmias of pregnancy—					
(1) Eclampsia of pregnancy ..	3	127	130	28	1
(2) Albuminuria and nephritis of pregnancy	1	62	63		
(3) Acute yellow atrophy of liver, associated with pregnancy					
(4) Hyperemesis gravidarum	3	103	106	..	3
(5) Others	24	458	482	10	23
145. Other diseases and accidents of pregnancy	.. 7	373	380	17	11
146. Hæmorrhage of childbirth and the puerperium—					
(1) Placenta prævia (with childbirth)	..	176	176	18	1
(2) Other hæmorrhage during or after childbirth	4	259	263	45	4
147. Infection during childbirth and the puerperium—					
(1) Puerperal pyrexia or septicæmia	4	138	142	21	3
(2) Puerperal thrombophlebitis	..	1	1		
(3) Puerperal embolism ..	..	3	3		
148. Puerperal toxæmias—					
(1) Puerperal eclampsia ..	..	52	52	17	
(2) Puerperal albuminuria and nephritis	4	64	68	1	
(3) Acute yellow atrophy of liver (post partum) ..					
(4) Others	6	126	132	4	5
149. Other accidents of childbirth—					
(1) Abnormal labour	39	1,759	1,798	66	34
(2) Others	4	297	301	29	8
150. Childbirth, and other conditions of childbirth and the puerperal state—					
(1) Mastitis during the puerperium and lactation	2	59	61		
(2) Puerperal psycoses ..	2	13	15	1	2
(3) Normal pregnancy, antenatal supervision	195	2,348	2,543	..	208
(4) Normal labour and delivery	497	30,047	30,544	..	505
XII.—Diseases of the Skin and Cellular Tissue.					
151. Carbuncle, boils	31	1,096	1,127	2	37
152. Cellulitis, acute abscess—					
(1) Of occupational origin ..	36	1,044	1,080	4	34
(2) Others	177	5,279	5,456	32	157
153. Other diseases of the skin and cellular tissue—					
(1) Scabies	56	1,783	1,839	..	27
(2) Ulcers, of nutritional origin	146	1,835	1,981	..	60
(3) Ulcers, not of nutritional origin	155	2,107	2,262	2	159
(4) Dermatitis and other conditions of occupational origin ..	7	642	649	..	17
(5) Others	159	4,483	4,642	6	162
Carried forward ..	10,622	169,753	180,375	8,970	10,641

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	10,622	169,753	180,375	8,970	10,641
XIII.—DISEASES OF THE BONES AND ORGANS OF MOVEMENT.					
154. Osteomyelitis and periostitis ..	24	279	303	11	27
155. Other diseases of the bones ..	67	459	526	6	33
156. Diseases of the joints and other organs of movement—					
(1) Diseases of the joints ..	72	1,225	1,297	2	46
(2) Diseases of the muscles	1	136	137	..	5
(3) Other diseases of organs of movement ..	46	531	577	..	22
XIV.—CONGENITAL MALFORMATIONS.					
157. Congenital malformations—					
(1) Congenital hydrocephalus	..	29	29	12	2
(2) Spina bifida and meningocele	2	10	12	3	
(3) Congenital malformation of heart	..	48	48	23	3
(4) Monstrosities	..	5	5	4	
(5) Congenital pyloric stenosis	..	3	3	2	
(6) Cleft palate, harelip ..	2	160	162	..	4
(7) Imperforate anus	3	36	39	15	3
(8) Other congenital malformations ..	4	89	93	26	5
XV.—DISEASES PECULIAR TO THE FIRST YEAR OF LIFE.					
158. Congenital debility	..	55	55	29	1
159. Premature birth	17	1,363	1,380	579	21
160. Injury at birth	..	73	73	21	
161. Other diseases peculiar to the first year of life—					
(1) Atelectasis	..	60	60	45	
(2) Icterus neonatorum ..	..	33	33	19	2
(3) Affections of the umbilicus	1	37	38	8	
(4) Pemphigus neonatorum	..	5	5		
(5) Others	6	351	357	154	7
XVI.—SENILITY, OLD AGE.					
162. Senility, old age—					
(1) Senility without mention of senile dementia ..	453	1,213	1,666	342	413
(2) Senility with mention of senile dementia ..	1	24	25	6	2
XVII.—CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES.					
163. Suicide or attempted suicide by poisoning—					
(1) By corrosive substances:					
(i) Caustic soda ..	2	146	148	44	
(ii) Other corrosive substances ..	1	29	30	12	1
(2) By analgesic, narcotic or soporific drugs ..	..	4	4		
(3) By other solid or liquid poisons	1	2	3		
(4) By gas					
Carried forward ..	11,325	176,158	187,483	10,333	11,238

Table 1—(*cont.*)

IN-PATIENTS—(*cont.*)

Return of Diseases and Deaths for the Year 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	11,325	176,158	187,483	10,333	11,238
XVII.—Conditions due to Violence or External Causes—(*cont.*)					
164. Other forms of suicide or attempted suicide—					
(1) By hanging or strangulation	..	21	21	8	
(2) By drowning	..	7	7	1	
(3) By firearms and explosives	1	7	8	3	2
(4) By cutting or piercing instruments	1	38	39	3	1
(5) By jumping from high places	..	5	5	4	
(6) By crushing					
(7) By other or unspecified means	..	44	44	5	4
165. Infanticide (infants under one year)					
166. Assault, or homicide by firearms	57	746	803	94	79
167. Assault, or homicide by cutting or piercing instruments	21	592	613	20	15
168. Assault or homicide by other means	28	1,264	1,292	17	34
169. Railway accidents	5	58	63	6	1
170. Motor vehicle accidents	65	2,363	2,428	156	154
171. Other road transport accidents	98	1,726	1,824	30	99
172. Water transport accidents	..	30	30		
173. Air transport accidents					
174. Accidents in mines and quarries	..	401	401	9	17
175. Agricultural or forestry accidents	..	131	131	..	4
176. Accidents caused by machinery	30	256	286	7	14
177. Food Poisoning	3	92	95		
178. Accidental absorbtion of poisonous gas	..	5	5	1	
179. Other acute accidental poisoning (not by gas)	..	117	117	8	2
180. Conflagration					
181. Accidental burns—(Conflagration excepted)					
(1) Burns by fire	35	549	584	42	20
(2) Scalds	19	503	522	10	26
(3) Burns by corrosive substances	..	58	58	1	3
(4) Dermatitis due to exposure to sun	..	59	59		
(5) Dermatitis due to exposure to other forms of radiation	..	60	60		
182. Accidental mechanical suffocation					
183. Accidental drowning	..	14	14	3	
184 Accidental injury by firearms	22	224	246	27	22
185. Accidental injury by cutting or piercing instruments	58	1,647	1,705	1	61
186. Accidental injury by fall, crushing, landslide, etc.—					
(1) By fall	187	6,365	6,552	90	251
(2) By crushing or landslide	50	1,059	1,109	11	23
187. Cataclysm (tidal waves, floods)					
188. Injury by animals (excepting venomous)	15	584	599	2	13
189. Hunger or thirst	..	4	4	2	
190. Excessive cold					
191. Excessive heat	..	6	6		
192. Lightning	..	12	12	1	
Carried forward ..	12,020	195,205	207,225	10,895	12,083

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(*All Hospitals including Special Institutions*)—(cont.)

Diseases.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Brought forward ..	12,020	195,205	207,225	10,895	12,083
XVII. CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES—(*cont.*)					
193. Other accidents due to electric currents	..	11	11	2	
194. Attack by venomous animals—					
(1) Snake bite	2	295	297	11	2
(2) Insect bite or sting ..	1	166	167	1	2
(3) Others	6	184	190	3	6
195. Other accidents—					
(1) Vaccinia	..	2	2	..	1
(2) Other sequelæ of vaccination against smallpox	..	6	6		
(3) Anæsthetic accidents ..					
(4) Other accidents due to medical or surgical intervention					
(5) Lack of the care of the new-born	..	4	4		
(6) Others	28	1,229	1,257	12	18
196. Deaths of persons in military service during operations at war	..	2	2	2	
197. Deaths of civilians due to operations of war	..	1	1	1	
198. Legal executions					
XVIII.—ILL-DEFINED CONDITIONS.					
199. Sudden death (cause unknown)					
200. Causes of death unstated or ill-defined	..	105	105	105	
SUPPLEMENTARY HEADINGS NOT INCLUDED IN THE INTERNATIONAL LIST.					
201. Diseases not included in this classification which have caused no deaths	109	4,066	4,175	..	169
202. Malingering	..	78	78		
203. Cases admitted to hospital for observation (mental)	2,884	3,501	6,385	387	3,248
204. Cases admitted for observation (not mental)	200	5,357	5,557	2	312
Total ..	15,250	210,212	225,462	11,421	15,841
205. Healthy persons admitted to hospital to accompany children or friends	256	10,933	11,189	..	193
Grand Total ..	15,506	221,145	236,651	11,421	16,034

TABLE 1—(*cont.*)

IN-PATIENTS—(*cont.*)

RETURN OF DISEASES AND DEATHS FOR THE YEAR 1950—(*cont.*)

(All Hospitals including Special Institutions)—(cont.)

Nationalities.	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Europeans	63	2,299	2,362	42	58
Eurasians	60	1,043	1,103	26	55
Chinese	9,036	86,224	95,260	7,585	9,513
Indians	3,166	68,050	71,216	2,575	3,188
Malays	2,803	50,044	52,847	1,076	2,910
Javanese	84	1,477	1,561	71	64
Japanese	1	8	9	2	1
Others	37	1,067	1,104	44	52
TOTAL ..	15,250	210,212	225,462	11,421	15,841
Healthy persons admitted to hospital to accompany children or friends	256	10,933	11,189	..	193

SUMMARY ACCORDING TO MEN, WOMEN AND CHILDREN.

—	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.
Men	10,364	113,372	123,736	5,394	10,632
Women	4,106	72,516	76,622	2,030	4,341
Children (1 to 10 years)	575	13,981	14,556	1,390	638
Infants (under 1 year)	205	10,343	10,548	2,607	230
TOTAL ..	15,250	210,212	225,462	11,421	15,841

SUMMARY ACCORDING TO HOSPITALS AND AVERAGE DAILY NUMBER OF PATIENTS.

—	Remaining at end of 31st Dec., 1949.	Admissions.	Total cases treated.	Deaths.	Remaining at end of 31st Dec., 1950.	Average daily No. of patients.	No. of Beds.
1. Kedah	732	22,011	22,743	673	725	812	1,045
2. Perlis	100	3,029	3,129	101	101	102	150
3. Penang and Province Wellesley ..	1,714	21,776	23,490	1,331	1,651	1,821	2,214
4. Perak	1,824	46,114	47,938	2,567	1,913	2,023	2,632
5. Selangor	1,474	28,755	30,229	1,857	1,473	1,627	1,812
6. Negri Sembilan ..	884	20,631	21,515	961	979	985	1,174
7. Malacca	587	9,645	10,232	625	580	611	817
8. Johore	1,608	30,866	32,474	1,842	1,575	1,696	2,350
9. Kelantan	306	5,880	6,186	193	330	329	456
10. Trengganu	208	4,031	4,239	117	199	227	301
11. Pahang	562	14,794	15,356	705	620	600	791
12. C. M. H., Tanjong Rambutan ..	2,750	2,208	4,958	381	3,081	2,925	3,000
13. Sungei Buloh Settlement	2,130	398	2,528	54	2,222	2,174	2,468
14. Leper Settlement, Johore Bharu ..	371	74	445	14	392	381	302
TOTAL ..	15,250	210,212	225,462	11,421	15,841	16,313	19,512

Table 1a.

STATEMENT OF GENERAL HOSPITALS, DISTRICT AND MATERNITY HOSPITALS.

State or Settlement.	Average daily No. of patients.	Patients remaining at the end of the year.	Patients admitted.	Deaths.	Death rate per 100 patients treated.
Kedah.					
Alor Star Hospital ..	404	360	9,679	313	3.1
Sungei Patani Hospital	165	145	6,126	202	3.2
Kulim Hospital ..	185	177	4,614	126	2.6
Baling Hospital ..	20	16	882	16	1.8
Langkawi Hospital ..	38	34	710	16	2.2
Perlis.					
Kangar Hospital ..	102	100	3,029	101	3.2
Penang and Province Wellesley.					
General Hospital ..	588	556	8,909	818	8.6
Maternity Hospital ..	70	72	4,211	61	1.4
Perak Road Hospital	95	46	27	18	24.7
Balik Pulau Hospital	13	11	281	4	1.4
Pulau Jerejak Detention Hospital ..	28	38	485	—	—
Pulau Jerejak T.B. Hospital	322	246	368	91	14.8
Butterworth Hospital	105	108	2,147	98	4.3
Bukit Mertajam Hospital	108	140	3,201	100	3.0
Sungei Bakap Hospital	94	89	1,794	125	6.6
Prison Hospital ..	10	12	304	—	—
Perak.					
Parit Buntar Hospital	39	38	1,819	36	1.9
Taiping Hospital ..	402	316	8,122	522	6.2
Kuala Kangsar District Hospital	91	67	2,761	77	2.7
Kuala Kangsar Women's Hospital..	76	75	2,499	119	4.6
Ipoh Hospital ..	538	458	11,165	828	7.1
Batu Gajah Hospital	245	203	4,401	223	4.8
Kampar Hospital ..	83	89	2,660	102	3.7
Tapah Hospital ..	160	174	3,146	149	4.5
Tanjong Malim Hospital	31	42	1,426	49	3.3
Telok Anson Hospital	198	199	4,843	256	5.1
Lumut Hospital ..	152	153	2,865	186	6.2
Grik Hospital ..	8	10	407	20	4.8
Carried forward ..	4,370	3,974	92,881	4,656	5.01

TABLE 1A—(*cont.*)

STATEMENT OF GENERAL HOSPITALS, DISTRICT AND MATERNITY HOSPITALS—(*cont.*)

State or Settlement.	Average daily No. of patients.	Patients remaining at the end of the year.	Patients admitted.	Deaths.	Death rate per 100 patients treated.
Brought forward ..	4,370	3,974	92,881	4,656	5.01
SELANGOR.					
Bungsar Hospital ..	38	25	1,063	31	2.8
General Hospital ..	469	370	12,285	1,049	8.3
Tanglin Hospital ..	106	121	1,864	45	2.3
Tuberculosis Hospital	113	115	165	41	14.6
Tai Wah Decrepit Hospital	431	423	286	104	14.7
Police Depot Hospital	7	2	371	—	—
Klang District Hospital	205	183	5,146	342	6.4
Kajang District Hospital	117	95	4,125	123	2.9
Kuala Kubu Bahru Hospital	65	58	1,650	90	5.3
Pudu Road Hospital*	76	82	1,800	32	1.7
NEGRI SEMBILAN.					
General Hospital ..	397	344	9,017	551	5.9
Kuala Pilah Hospital	311	305	5,834	191	3.1
Port Dickson Hospital	107	104	1,685	93	5.2
Tampin Hospital ..	85	66	2,114	83	3.8
Jelebu Hospital ..	80	65	1,888	43	2.2
Prison Hospital ..	5	—	93	—	—
MALACCA.					
General Hospital ..	526	525	9,014	615	6.4
Alor Gajah Hospital ..	29	26	20	9	19.6
Prison Hospital ..	3	—	34	—	—
Detention Camp Hospital	53	36	577	1	.2
JOHORE.					
General Hospital ..	622	654	8,726	676	7.2
3rd Mile (Chronic Wards) Hospital ..	178	175	—	30	17.1
Pontian Hospital ..	53	47	1,471	63	4.2
Batu Pahat Hospital	153	139	3,306	168	4.9
Muar Hospital ..	202	177	4,645	315	6.5
Tangkak Hospital ..	71	77	1,282	69	5.1
Segamat Hospital ..	128	89	3,640	193	5.2
Kluang Hospital ..	178	153	4,904	226	4.5
Kota Tinggi Hospital	80	64	1,613	61	3.6
Mersing Hospital ..	31	33	1,279	41	3.1
Carried forward ..	9,289	8,527	182,778	9,941	5.44

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* Closed on 17-4-1950.

TABLE 1A—(*cont.*)

STATEMENT OF GENERAL HOSPITALS, DISTRICT AND MATERNITY HOSPITALS—(*cont.*)

State or Settlement.	Average daily No. of patients.	Patients remaining at the end of the year.	Patients admitted.	Deaths.	Death rate per 100 patients treated.
Brought forward ..	9,289	8,527	182,778	9,941	5.44
KELANTAN.					
Kota Bahru Hospital	283	262	4,431	166	3.4
Kuala Krai Hospital ..	37	44	1,386	27	1.9
Prison Hospital ..	9	—	63	—	—
TRENGGANU.					
Kuala Trengganu Hospital	154	135	1,912	71	3.5
Kemaman Hospital ..	50	47	959	38	3.8
Dungun Hospital ..	23	26	1,160	8	.7
PAHANG.					
Kuantan Hospital ..	138	128	2,811	119	4.0
Kuala Lipis Hospital ..	116	130	2,997	140	4.5
Raub Hospital ..	82	84	2,466	102	4.0
Bentong Hospital ..	103	88	1,960	181	8.8
Mentakab Hospital ..	100	80	3,558	142	3.9
Pekan Hospital ..	61	52	1,002	21	2.0
	10,445	9,603	207,483	10,956	
SPECIAL INSTITUTIONS.					
Leper Settlement, Sungei Buloh ..	2,174	2,130	398	54	2.1
Central Mental Hospital, Tanjong Rambutan	2,925	2,750	2,208	381	7.7
Leper Settlement, Pulau Jerejak ..	388	396	49	16	3.6
Leper Camp, Johore Bahru	381	371	74	14	3.1
	5,868	5,647	2,729	465	
TOTAL ..	16,313	15,250	210,212	11,421	5.1

TABLE 2.

MALARIA ADMISSIONS BY STATES AND MONTHS FOR 1950.

State or Settlement.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.
Kedah	167	166	133	154	249	237	186	121	95	120	96	123
Perlis	64	79	44	65	45	40	35	21	30	43	38	38
Penang and P. Wellesley	68	66	57	73	97	79	71	61	38	55	46	38
Perak	222	195	218	254	355	277	283	276	325	343	312	314
Selangor	53	24	53	40	79	88	63	80	67	80	76	87
Negri Sembilan	134	97	124	156	258	216	165	140	122	162	117	109
Malacca	76	44	49	64	125	122	67	42	64	63	62	37
Johore	156	91	106	139	254	184	168	164	170	182	152	150
Kelantan	47	52	39	51	69	62	69	35	31	29	43	38
Trengganu..	33	52	52	35	47	63	54	47	25	23	25	27
Pahang	115	114	94	167	191	204	177	152	109	129	107	119
Total ..	1,135	980	969	1,198	1,769	1,572	1,338	1,139	1,076	1,229	1,074	1,080

Table 3.

SURGICAL OPERATIONS FOR 1950.

State or Settlement.	Operations.	Deaths.
Kedah	1,511	7
Perlis	280	—
Penang and Province Wellesley	3,799	50
Perak	11,885	82
Selangor	6,012	74
Negri Sembilan	1,536	9
Malacca	1,235	19
Johore	5,360	135
Kelantan	1,136	—
Trengganu	824	1
Pahang	989	8
Total	34,567	385

Table 4.

OPHTHALMIC PATIENTS FOR 1950.

State/Settlement.	Eye diseases proper.	Eye injuries.	Refraction.	General diseases affecting eyes.	Disorganised eyes.	Total.	Operations.
Kedah	2,708	47	111	364	12	3,242	217
Perlis	1,831	72	—	20	—	1,923	36
Penang and Province Wellesley	2,571	245	503	908	52	4,279	292
Perak	5,447	533	1,143	66	54	6,243	922
Selangor	4,842	369	645	—	141	5,997	529
Negri Sembilan	1,671	129	373	21	5	2,199	33
Malacca	960	116	702	36	22	1,836	133
Johore	2,035	129	2,825	135	—	5,124	231
Kelantan	7,944	20	—	22	—	7,986	15
Trengganu	30	—	47	—	—	77	—
Pahang	1,138	16	48	9	—	1,211	1
Total	31,177	1,676	6,397	1,581	286	40,117	2,409

Table 5.

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1950.

(Excluding those who were treated at Infant Welfare Centres, School Inspections and Special Clinics.)

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
KEDAH.				
At Hospitals and Dispensaries ..	80,056	50,866	58,076	188,998
By Travelling Dispensaries ..	20,674	7,418	9,758	37,850
Total ..	100,730	58,284	67,834	226,848
PERLIS.				
At Hospitals and Dispensaries ..	13,359	7,395	10,323	31,077
By Travelling Dispensaries ..	1,799	880	1,962	4,641
Total ..	15,158	8,275	12,285	35,718
PENANG AND PROVINCE WELLESLEY.				
At Hospitals and Dispensaries ..	43,882	29,069	26,010	98,961
By Travelling Dispensaries ..	14,739	11,364	25,792	51,895
Total ..	58,621	40,433	51,802	150,856
PERAK.				
At Hospitals and Dispensaries ..	176,381	70,730	79,241	326,352
By Travelling Dispensaries :				
1. Road	45,215	26,118	34,704	106,037
2. River	5,353	2,224	2,170	9,747
Total ..	226,949	99,072	116,115	442,136

Table 5—(*cont.*).

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1950—(*cont.*).

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
SELANGOR.				
At Hospitals and Dispensaries ..	106,364	61,898	66,699	234,961
By Travelling Dispensaries ..	28,192	22,141	24,229	74,562
Total ..	134,556	84,039	90,928	309,523
NEGRI SEMBILAN.				
At Hospitals and Dispensaries ..	55,555	24,489	33,116	113,160
By Travelling Dispensaries ..	21,571	15,495	17,913	54,979
Total ..	77,126	39,984	51,029	168,139
MALACCA.				
At Hospitals and Dispensaries ..	28,519	13,234	14,752	56,505
By Travelling Dispensaries ..	6,805	5,353	8,582	20,740
Total ..	35,324	18,587	23,334	77,245
JOHORE.				
At Hospitals and Dispensaries ..	62,554	18,738	29,579	110,871
By Travelling Dispensaries :				
1. Road	28,395	13,342	39,269	81,006
2. River	5,290	2,915	6,094	14,299
Total ..	96,239	34,995	74,942	206,176

TABLE 5—(*cont.*).

SUMMARY OF OUT-PATIENTS TREATED IN EACH STATE AND SETTLEMENT FOR 1950—(*cont.*).

Hospitals and Dispensaries.	Adult Males.	Adult Females.	Children under 10 years.	Total.
KELANTAN.				
At Hospitals and Dispensaries ..	42,261	18,726	18,815	79,802
By Travelling Dispensaries:				
1. Road	15,077	13,208	27,165	55,450
2. River	5,846	2,990	3,404	12,240
Total ..	63,184	34,924	49,384	147,492
TRENGGANU.				
At Hospitals and Dispensaries ..	36,306	15,064	27,270	78,640
By Travelling Dispensaries ..	28,382	18,902	31,239	78,523
Total ..	64,688	33,966	58,509	157,163
PAHANG.				
At Hospitals and Dispensaries ..	54,300	29,779	37,932	122,011
By Travelling Dispensaries:				
1. Road	24,238	15,884	18,965	59,087
2. River	7,295	6,074	10,590	23,959
Total ..	85,833	51,737	67,487	205,057

Table 6.

OUT-PATIENTS.

Return of Diseases for the Year 1950.

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
I.—Infectious and Parasitic Diseases.								
1. Typhoid fever	16	8	9	33	..	..	1	1
2. Paratypoid fevers	2	2	..	4	..	..	..	..
3. Plague	..	..	..	..	..	..	..	..
4. Cholera	..	..	..	..	..	..	..	..
5. Undulent fever (brucellosis) ..	..	..	..	..	..	..	..	..
6. Cerebro-spinal (meningococcal) meningitis	..	1	..	1	..	..	..	..
7. Malignant pustule and anthrax	..	..	..	..	..	..	..	..
8. Scarlet fever	..	..	..	..	..	..	..	..
9. Whooping cough	13	11	1,657	1,681	..	..	8	8
10. Diphtheria	6	10	59	75	1	..	..	1
11. Erysipelas	19	4	6	29	..	..	..	..
12. Tetanus	4	2	7	13	..	..	..	..
13. Tuberculosis of the respiratory system	3,078	1,043	40	4,161	2	1	..	3
14-22. Other forms of tuberculosis	119	61	60	240	..	..	..	..
23. Leprosy	68	9	2	79	..	..	..	..
24. Purulent infection and septicæmia	10	4	..	14	..	..	..	..
25. Gonococcal infections—								
(1) Of genito-urinary system	2,382	417	5	2,804	79	..	..	79
(2) Of eyes	38	30	12	80	..	..	..	..
(3) Other sites	742	108	..	850	5	..	..	5
26. Other bacterial diseases (dysentery excepted) ..	..	..	..	..	..	..	..	..
27. Dysentery—								
(1) Bacillary	234	91	64	389	2	..	..	2
(2) Amœbic	473	144	134	751	6	..	..	6
(3) Others	1,771	853	997	3,621	8	2	5	15
28. Malaria—								
(1) Benign tertian	2,364	893	1,070	4,327	28	2	2	32
(2) Quartan	90	26	46	162	..	..	..	..
(3) Subtertian	2,897	922	1,148	4,967	13	..	..	13
(4) Blackwater fever ..	..	..	..	..	..	..	..	..
(5) Type unspecified, including cachexia	50,998	23,135	25,920	100,053	94	18	6	118
29. Other diseases due to parasitic protozoa, except spirochætes	88	42	29	159	..	..	..	..
30. Syphilis—								
(1) Primary	555	156	3	714	10	..	..	10
(2) Secondary	2,110	986	10	3,106	8	3	..	11
(3) Tertiary	368	348	..	716	..	..	..	..
(4) Congenital	..	..	81	81	..	..	..	..
(5) With gonorrhœa ..	62	29	..	91	1	..	..	1
(6) With other infections ..	202	85	41	328	..	..	..	..
31. Relapsing fever	..	..	..	..	..	..	..	..
32. Other diseases due to spirochætes—								
(1) Yaws	12,788	9,204	9.029	31,021	..	..	..	..
(2) Others	..	..	..	..	..	..	..	..
33. Influenza	57,557	21,757	30,159	109,473	465	189	129	783
34. Smallpox	..	..	..	..	..	..	..	..
35. Measles	65	33	961	1,059	..	..	6	6
36. Acute poliomyelitis and poliœncephalitis	..	..	1	1	..	..	..	..
37. Acute infectious encephalitis (lethargic or epidemic) ..	..	..	..	..	..	..	..	..
38. Other diseases due to viruses—								
(1) Yellow fever	..	..	..	..	..	..	..	..
(2) Rabies	7	2	..	9	..	..	..	..
(3) Herpes zoster	131	30	17	178	..	..	..	..
(4) German measles (rubella)	..	..	..	..	..	..	..	..
(5) Varicella (chicken-pox) ..	185	65	200	450	..	..	..	..
(6) Dengue	3	3	2	8	..	..	..	..
(7) Others	..	..	..	..	..	..	..	..
39. Typhus and typhus-like diseases (rickettsioses)	..	..	..	..	..	..	..	..
(1) Tropical typhus ..	..	..	..	..	..	..	..	..
(2) Others	..	..	..	..	..	..	..	..
Carried forward ..	139,445	60.514	71.769	271,728	722	215	157	1,094

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	139,445	60,514	71,769	271,728	722	215	157	1,094
I.—INFECTIOUS AND PARASITIC DISEASES—(*cont.*)								
40. Ankylostomiasis	4,577	2,980	4,251	11,808	21	19	10	50
41 & 42. Other diseases due to helminths—								
(1) Ascariasis (round-worms)	13,965	8,978	44,410	67,353	59	51	109	219
(2) Filariasis	175	110	398	683	5	..	3	8
(3) Others	851	786	3,361	4,998	4	8	20	32
43. Mycosis—								
(1) Of the skin	1,500	563	365	2,428	44	13	7	64
(2) Others	94	82	56	232	2	..	..	2
44. Other infective or parasitic diseases	681	219	491	1,391	3	..	1	4
II. CANCER AND OTHER TUMOURS.								
45. Cancer of the buccal cavity and pharynx	16	14	..	30	..	..	..	..
46. Cancer of the digestive organs and peritoneum	63	31	..	94	1	..	..	1
47-55. Other forms of cancer ..	67	157	3	227	1	1	..	2
56 & 57. Non-malignant tumours ..	512	292	46	850	8	4	1	13
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS, OTHER GENERAL DISEASES, AND VITAMIN DEFICIENCY DISEASES.								
58 & 59. Rheumatic diseases ..	10,031	4,966	..	14,997	31	11	..	42
60-66. Diseases of metabolism and of ductless glands ..	1,930	1,838	1,045	4,813	11	5	7	23
67. Scurvy	..	..	18	18	..	..	..	..
68. Beri-beri	2,286	1,678	140	4,104	..	..	..	..
69. Pellagra	31	8	2	41	..	..	..	..
70. Rickets	..	..	120	120	..	..	..	..
71. Other vitamin deficiency diseases	2,286	2,444	1,116	5,846	12	8	5	25
IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.								
72. Hæmorrhagic conditions ..	73	97	20	190	..	3	1	4
73. Anæmias	23,593	33,748	8,107	65,448	69	183	19	271
74. Leukæmias and aleukæmias ..	1	5	..	6	..	..	..	..
75 & 76. Diseases of spleen and blood-forming organs ..	74	77	40	191	..	..	..	..
V.—CHRONIC POISONING AND INTOXICATION.								
77. Alcoholism (acute or chronic) ..	453	12	..	465	4	..	..	4
78. Lead poisoning	..	1	..	1	..	..	..	..
79. Chronic poisoning by other mineral and organic substances—								
(*a*) Occupational:								
(1) Arsenical dermatitis ..	13	6	1	20	..	..	..	..
(2) Arsenical poisoning other forms	1	1	..	2	..	..	..	..
(3) Other occupational poisoning ..	36	11	2	49	..	..	..	..
(*b*) Poisoning by narcotic and soporific drugs ..	288	40	..	328	..	..	..	..
(*c*) Other or unspecified poisoning	43	7	16	66	..	..	..	..
Carried forward ..	203,085	119,665	135,777	458,527	997	521	340	1,858

Table 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

Return of Diseases for the Year 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	203,085	119,665	135,777	458,527	997	521	340	1,858
VI.—Diseases of the Nervous System and Sense Organs.								
80-85 & 87. Diseases of the nervous system	31,843	14,807	1,830	48,480	456	329	8	793
86. Convulsions in children (age under 5 years)	..	..	240	240	..	..	1	1
88. Diseases of the organs of vision	27,964	13,666	15,032	56,662	119	56	15	190
89. Diseases of the ear and of the mastoid antrum	12,132	5,246	10,987	28,365	254	75	57	386
VII.—Diseases of the Circulatory System.								
90-99. Diseases of the heart and arteries	887	557	43	1,487	2	1	..	3
100. Diseases of the veins	1,836	569	49	2,454	27	10	..	37
101. Diseases of the lymphatic system—								
(1) Abscess, bubo (non-specific), adenitis ..	1,707	792	683	3,182	12	2	..	14
(2) Lymphadenitis ..	769	241	289	1,299	12	1	2	15
(3) Others	334	109	269	712	2	1	1	4
102. High blood pressure (idiopathic)	408	172	..	580	..	2	..	2
103. Other diseases of the circulatory system—								
(1) Low blood pressure ..	6	10	..	16	..	..	..	..
(2) Epistaxis	128	27	105	260	..	..	..	..
(3) Others, including hæmorrhage with unknown origin ..	80	195	28	303	..	..	..	..
VIII.—Diseases of the Respiratory System.								
104 & 105. Diseases of the nose and throat	6,117	2,195	2,899	11,211	73	31	9	113
106. Bronchitis	75,398	35,528	77,330	188,256	426	205	259	890
107-109. Pneumonia	663	348	2,366	3,377	3	1	2	6
110. Pleurisy	227	75	6	308	3	..	..	3
111, 113 & 114. Other diseases of the respiratory system	2,456	1,716	3,214	7,386	19	6	9	34
112. Asthma	10,045	4,847	4,305	19,197	22	11	2	35
IX.—Diseases of the Digestive System.								
115 & 116. Diseases of the mouth and throat	19,761	9,243	15,449	44,453	273	94	107	474
117 & 118. Diseases of the stomach	28,307	17,204	6,895	52,406	272	121	40	433
119. Enteritis and diarrhœa (under 2 years)	..	..	10,964	10,964	..	..	50	50
120. Enteritis and diarrhœa (2 years and over)	12,041	5,469	7,004	24,514	188	76	46	310
121. Appendicitis	149	50	8	207	8	8	1	17
122. Hernia and intestinal obstruction	342	9	30	381	5	..	..	5
123. Other diseases of the intestines—								
(1) Constipation	30,218	13,052	11,056	54,326	100	58	35	193
(2) Others	3,067	2,103	1,280	6,450	19	8	2	29
124-129. Other diseases of the digestive system	2,001	1,404	622	4,027	12	6	..	18
Carried forward ..	471,971	249,299	308,760	1,030,030	3,304	1,623	986	5,913

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	471,971	249,299	308,760	1,030,030	3,304	1,623	986	5,913
X.—DISEASES OF THE URINARY AND GENITAL SYSTEMS (NON-VENEREAL, AND NOT CONNECTED WITH PREGNANCY OR THE PUERPERIUM).								
130-139. Diseases of the urinary and genital systems	6,814	9,266	828	16,908	99	115	7	221
XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE.								
140-150. Diseases of pregnancy, child-birth and the puerperal state	..	10,423	..	10,423	..	292	..	292
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE.								
151-153. Diseases of the skin and cellular tissue	134,352	42,538	64,189	241,079	940	283	152	1,375
XIII.—DISEASES OF THE BONES AND ORGANS OF MOVEMENT.								
154-156. Diseases of the bones and organs of movement (excluding injuries) ..	8,332	3,872	466	12,670	52	41	2	95
XIV AND XV.—CONGENITAL MALFORMATIONS AND DISEASES PECULIAR TO THE FIRST YEAR OF LIFE.								
157-161. Congenital malformations and diseases peculiar to the first year of life ..	3	12	315	330	..	..	5	5
XVI.—SENILITY, OLD AGE.								
162. Senility, old age	3,088	2,214	..	5,302	1	3	..	4
XVII.—CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES.								
163. Suicide or attempted suicide by poisoning	2	3	3	8	..	..	..	..
164. Other forms of suicide or attempted suicide	2	1	..	3	..	..	..	..
166. Assault, or homicide by firearms	103	13	4	120	5	..	..	5
167. Assault, or homicide by cutting or piercing instruments ..	369	149	9	527	..	..	..	..
168. Assault or homicide by other means	2,044	776	82	2,902	2	..	..	2
169. Railway accidents	15	2	..	17	2	..	..	2
170. Motor vehicle accidents ..	1,006	223	181	1,410	21	3	1	25
171. Other road transport accidents	1,959	677	534	3,170	12	1	1	14
172. Water transport accidents ..	93	12	..	105	..	..	..	..
173. Air transport accidents ..	..	..	..	..	..	..	..	..
174. Accidents in mines and quarries	645	137	..	782	3	..	..	3
175. Agricultural and forestry accidents	370	108	36	514	..	..	..	..
176. Accidents caused by machinery	225	33	8	266	..	..	..	..
177. Food poisoning	32	14	2	48	..	..	..	..
Carried forward ..	631,425	319,772	375,417	1,326,614	4,441	2,361	1,154	7,956

TABLE 6—(*cont.*)

OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).				New Cases. Europeans only.			
	Adult Males.	Adult Females.	Children under 10 years.	Total.	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	631,425	319,772	375,417	1,326,614	4,441	2,361	1,154	7,956
XVII.—CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES —(*cont.*)								
178. Accidental absorbtion of poisonous gas	2	..	..	2	..	..	..	..
179. Other acute accidental poisoning (not by gas)	16	..	2	18	..	..	..	..
180. Conflagration	1	..	..	1	1	..	..	1
181. Accidental burns (conflagration excepted)	2,461	982	1,884	5,327	34	4	4	42
182. Accidental mechanical suffocation	5	1	1	7	..	..	..	..
183. Accidental drowning	1	3	2	6	..	..	..	..
184. Accidental injury by firearms ..	1,117	56	220	1,393	5	1	1	7
185. Accidental injury by cutting or piercing instruments	8,210	1,996	3,070	13,276	54	6	12	72
186. Accidental injury by fall, crushing, landslide, etc. ..	34,313	7,608	11,848	53,769	282	51	54	387
187. Cataclysm (tidal waves, floods)	..	..	..	..	..	..	..	..
188. Injury by animals (excepting venomous)	1,639	641	883	3,163	15	4	1	20
189-192. Hunger or thirst, heat or cold and lightning	3	..	..	3	..	..	..	..
193. Other accidents due to electric currents	3	1	..	4	..	..	..	..
194. Attack by venomous animals—								
(1) Snake bite	79	28	22	129	4	4	..	8
(2) Insect bite or sting ..	971	260	300	1,531	23	..	4	27
(3) Others	616	182	227	1,025	5	1	..	6
195. Other accidents—								
(1) Vaccinia	7	..	6	13	..	..	..	..
(2) Other sequelæ of vaccination against smallpox	25	8	345	378	..	..	8	8
(3) Others	1,478	242	343	2,063	6	1	..	7
SUPPLEMENTARY HEADINGS NOT INCLUDED IN THE INTERNATIONAL LIST.								
201. Diseases not included in this classification which have caused no deaths	17,141	8,208	7,243	32,592	102	56	16	174
202. Malingering	24	..	..	24	..	..	..	..
TOTAL ..	699,537	339,988	401,813	1,441,338	4,972	2,489	1,254	8,715

RETURN OF DISEASES (OUT-PATIENTS) FOR THE YEAR 1950.

Nationalities.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total. (A)
Europeans	4,972	2,489	1,254	8,715
Eurasians	5,388	3,096	2,417	10,901
Chinese	239,328	139,395	173,867	552,590
Indians	161,197	72,338	80,567	314,102
Malays	276,072	117,747	138,342	532,161
Javanese	8,245	2,624	3,697	14,566
Japanese	45	12	..	57
Others	4,290	2,287	1,669	8,246
TOTAL ..	699,537	339,988	401,813	1,441,338

Table 7.

TRAVELLING DISPENSARIES OUT-PATIENTS.

Return of Diseases for the Year 1950.

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
I.—Infectious and Parasitic Diseases.				
1. Typhoid fever	..	..	..	..
2. Paratypoid fevers	..	..	..	..
3. Plague	..	..	..	..
4. Cholera	..	..	..	..
5. Undulent fever (brucellosis)	..	..	..	..
6. Cerebro-spinal (meningoccal) meningitis	..	..	..	..
7. Malignant pustule and anthrax	..	..	..	..
8. Scarlet fever	..	..	..	..
9. Whooping cough	18	14	177	209
10. Diphtheria	4	4	4	12
11. Erysipelas	1	..	..	1
12. Tetanus	..	..	..	..
13. Tuberculosis of the respiratory system	150	53	..	203
14-22. Other forms of tuberculosis	1	4	1	6
23. Leprosy	6	2	..	8
24. Purulent infection and septicaemia	..	..	..	..
25. Gonococcal infections—				
(1) Of genito-urinary system	108	40	4	152
(2) Of eyes	7	5	..	12
(3) Other sites	91	36	21	148
26. Other bacterial diseases (dysentery excepted)	..	..	..	..
27. Dysentery—				
(1) Bacillary	49	19	10	78
(2) Amœbic	15	4	12	31
(3) Others	702	471	523	1,696
28. Malaria—				
(1) Benign tertian	97	65	110	272
(2) Quartan	4	3	6	13
(3) Subtertian	251	148	225	624
(4) Blackwater fever	..	..	..	..
(5) Type unspecified, including cachexia	43,338	23,831	25,639	92,808
29. Other diseases due to parasitic protozoa, except spirochætes	..	..	..	..
30. Syphilis—				
(1) Primary	22	6	1	29
(2) Secondary	60	55	2	117
(3) Tertiary	22	13	..	35
(4) Congenital	..	..	11	11
(5) With gonorrhœa	24	6	..	30
(6) With other infections	29	19	3	51
31. Relapsing fever	..	..	..	..
32. Other diseases due to spirochætes—				
(1) Yaws	8,645	6,071	13,191	27,907
(2) Others	..	..	..	..
33. Influenza	9,755	6,159	11,550	27,464
34. Smallpox	..	..	..	..
35. Measles	13	10	325	348
36. Acute poliomyelitis and poliœncephalitis	..	..	..	..
37. Acute infectious encephalitis (lethargic or epidemic)	..	..	..	..
38. Other diseases due to viruses—				
(1) Yellow fever	..	..	..	..
(2) Rabies	..	..	..	..
(3) Herpes zoster	14	12	10	36
(4) German measles (rubella)	..	..	..	..
(5) Varicella (chicken-pox)	20	11	116	147
(6) Dengue	..	..	1	1
(7) Others	..	..	..	..
39. Typhus and typhus-like diseases (rickettsioses)				
(1) Tropical typhus	..	..	..	..
(2) Others	..	..	..	..
40. Ankylostomiasis	1,589	1,011	1,572	4,172
41 & 42. Other diseases due to helminths—				
(1) Ascariasis (roundworms)	5,965	4,928	33,964	44,857
(2) Filariasis	30	13	8	51
(3) Others	823	528	2,853	4,204
Carried forward	71,853	43,541	90,339	205,733

TABLE 7—(*cont.*).

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*).

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*).

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	71,853	43,541	90,339	205,733
I.—INFECTIOUS AND PARASITIC DISEASES —(*cont.*)				
43. Mycosis—				
(1) Of the skin	218	31	43	292
(2) Others	180	65	164	409
44. Other infective or parasitic diseases ..	172	164	1,289	1,625
II.—CANCER AND OTHER TUMOURS.				
45. Cancer of the buccal cavity and pharynx	..	..	..	..
46. Cancer of the digestive organs and peritoneum	2	..	..	2
47-55. Other forms of cancer	..	..	..	..
56 & 57. Non-malignant tumours	139	73	..	212
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF THE ENDOCRINE GLANDS, OTHER GENERAL DISEASES, AND VITAMIN DEFICIENCY DISEASES.				
58 & 59. Rheumatic diseases	4,185	2,473	49	6,707
60-66. Diseases of metabolism and of ductless glands	188	537	880	1,605
67. Scurvy	..	..	..	..
68. Beri-beri	482	359	122	963
69. Pellagra	..	..	..	..
70. Rickets	..	..	87	87
71. Other vitamin deficiency diseases ..	380	347	876	1,603
IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.				
72. Hæmorrhagic conditions	3	5	..	8
73. Anæmias	9,114	14,209	8,087	31,410
74. Leukæmias and aleukæmias	..	..	..	..
75 & 76. Diseases of spleen and blood-forming organs	10	4	19	33
V.—CHRONIC POISONING AND INTOXICATION.				
77. Alcoholism (acute or chronic)	..	..	..	..
78. Lead poisoning	..	..	..	..
79. Chronic poisoning by other mineral and organic substances—				
(*a*) Occupational				
(1) Arsenical dermatitis ..	2	1	..	3
(2) Arsenical poisoning, other forms	..	..	..	..
(3) Other occupational poisoning	..	..	..	..
(*b*) Poisoning by narcotic and soporific drugs	..	..	..	..
(*c*) Other or unspecified poisoning ..	7	6	23	36
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.				
80-85 & 87. Diseases of the nervous system ..	21,421	13,951	2,928	38,300
86. Convulsions in children (age under 5 years)	..	..	17	17
88. Diseases of the organs of vision	7,144	6,017	9,556	22,717
89. Diseases of the ear and of the mastoid antrum	1,748	1,287	5,634	8,669
Carried forward ..	117,248	83,070	120,113	320,431

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	117,248	83,070	120,113	320,431
VII.—DISEASES OF THE CIRCULATORY SYSTEM.				
90-99. Diseases of the heart and arteries ..	16	11	1	28
100. Diseases of the veins	98	63	7	168
101. Diseases of the lymphatic system—				
(1) Abscess, bubo (non-specific), adenitis	156	41	136	333
(2) Lymphadenitis	21	4	2	27
(3) Others	24	77	22	123
102. High blood pressure (idiopathic) ..	1	..	..	1
103. Other diseases of the circulatory system—				
(1) Low blood pressure	..	..	..	..
(2) Epistaxis..	18	7	21	46
(3) Others, including hæmorrhage with unknown origin.. ..	2	4	2	8
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.				
104 & 105. Diseases of the nose and throat ..	415	251	449	1,115
106. Bronchitis	25,669	15,860	31,535	73,064
107-109. Pneumonia	130	80	262	472
110. Pleurisy	3	4	..	7
111, 113 & 114. Other diseases of the respiratory system ..	41	27	35	103
112. Asthma	2,292	1,300	1,278	4,870
IX.—DISEASES OF THE DIGESTIVE SYSTEM.				
115 & 116. Diseases of the mouth and throat	3,000	2,263	5,348	10,611
117 & 118. Diseases of the stomach	6,482	5,630	4,678	16,790
119. Enteritis and diarrhœa (under 2 years) ..	..	..	2,319	2,319
120. Enteritis and diarrhœa (2 years and over)	2,633	1,713	2,077	6,423
121. Appendicitis	6	..	..	6
122. Hernia and intestinal obstruction ..	13	..	1	14
123. Other diseases of the intestines—				
(1) Constipation	14,173	7,435	6,577	28,185
(2) Others	762	657	819	2,238
124-129. Other diseases of the digestive system	1,033	516	1,031	2,580
X.—DISEASES OF THE URINARY AND GENITAL SYSTEMS (NON-VENEREAL, AND NOT CONNECTED WITH PREGNANCY OR THE PUERPERIUM).				
130-139. Diseases of the urinary and genital systems	415	429	129	973
XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE.				
140-150. Diseases of pregnancy, child-birth and the puerperal state	..	728	..	728
XII.—DISEASE OF THE SKIN AND CELLULAR TISSUE.				
151-153. Diseases of the skin and cellular tissue	61,428	30,915	70,243	162,586
Carried forward ..	236,079	151,085	247,085	634,249

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	236,079	151,085	247,085	634,249
XIII.—DISEASES OF THE BONES AND ORGANS OF MOVEMENT.				
154-156. Diseases of the bones and organs of movement (excluding injuries) ..	4,983	3,844	905	9,732
XIV AND XV.—CONGENITAL MALFORMATIONS AND DISEASES PECULIAR TO THE FIRST YEAR OF LIFE.				
157-161. Congenital malformations and diseases peculiar to the first year of life	..	..	83	83
XVI.—SENILITY, OLD AGE.				
162. Senility, old age	2,199	1,192	..	3,391
XVII.—CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES.				
163. Suicide or attempted suicide by poisoning	..	..	..	..
164. Other forms of suicide or attempted suicide	..	..	..	..
166. Assault, or homicide by firearms ..	..	..	..	..
167. Assault, or homicide by cutting or piercing instruments	..	..	..	..
168. Assault or homicide by other means ..	..	..	..	..
169. Railway accidents	..	..	..	..
170. Motor vehicles accidents	14	..	4	18
171. Other road transport accidents	55	42	39	136
172. Water transport accidents	..	..	..	..
173. Air transport accidents	..	..	..	..
174. Accidents in mines and quarries ..	101	48	46	195
175. Agricultural and forestry accidents ..	10	..	..	10
176. Accidents caused by machinery ..	11	..	..	11
177. Food poisoning	..	..	..	..
178. Accidental absorbtion of poisonous gas	..	..	..	..
179. Other acute accidental poisoning (not by gas)	..	..	..	..
180. Conflagration	..	..	..	..
181. Accidental burns (conflagration excepted)	456	329	708	1,493
182. Accidental mechanical suffocation ..	..	..	..	..
183. Accidental drowning	..	..	..	..
184. Accidental injury by firearms	..	..	..	..
185. Accidental injury by cutting or piercing instruments	4,641	2,336	2,856	9,833
186. Accidental injury by fall, crushing, landslide, etc.	6,443	3,158	5,497	15,098
187. Cataclysm (tidal waves, floods)	..	..	..	..
188. Injury by animals (excepting venomous)	12	5	7	24
189-192. Hunger or thirst, heat or cold and lightning	1	..	..	1
193. Other accidents due to electric currents ..	29	7	9	45
194. Attack by venomous animals—				
(1) Snake bite	12	9	14	35
(2) Insect bite or sting	90	49	49	188
(3) Others	31	12	16	59
Carried forward ..	255,167	162,116	257,318	674,601

TABLE 7—(*cont.*)

TRAVELLING DISPENSARIES OUT-PATIENTS—(*cont.*)

RETURN OF DISEASES FOR THE YEAR 1950—(*cont.*)

Diseases.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total.
Brought forward ..	255,167	162,116	257,318	674,601
XVII.—CONDITIONS DUE TO VIOLENCE OR EXTERNAL CAUSES—(*cont.*)				
195. Other accidents—				
(1) Vaccinia	..	..	44	44
(2) Other sequelæ of vaccination against smallpox	..	..	171	171
(3) Others	36	9	27	72
SUPPLEMENTARY HEADINGS NOT INCLUDED IN THE INTERNATIONAL LIST.				
201. Diseases not included in this classification which have caused no deaths ..	3,658	2,182	4,276	10,116
202. Malingering	10	1	..	11
TOTAL ..	258,871	164,308	261,836	685,015

RETURN OF DISEASES (OUT-PATIENTS) FOR THE YEAR 1950.

Nationalities.	New Cases. All Nationalities (including Europeans).			
	Adult Males.	Adult Females.	Children under 10 years.	Total. (A)
Europeans	14	3	2	19
Eurasians	73	50	84	207
Chinese	57,326	39,491	59,922	156,739
Indians	21,008	13,181	15,455	49,644
Malays	162,382	100,885	169,709	432,976
Javanese	10,642	6,184	11,962	28,788
Japanese	..	1	..	1
Others	7,426	4,513	4,702	16,641
TOTAL ..	258,871	164,308	261,836	685,015

TABLE 8.

DENTAL—SUMMARY OF WORK DONE FOR THE YEAR 1950.

State or Settlement.	Attendance.	EXTRACTIONS.		FILLINGS.				Scalings.
		Temporary teeth.	Permanent teeth.	Amalgam.	Silicate.	Inlay.	Filling.	
Kedah	21,616	4,784	7,513	5,195	800	45	29	1,958
Perlis	—	—	—	—	—	—	—	—
Penang	19,720	5,664	14,317	5,408	1,824	136	—	881
Perak	24,503	9,473	10,954	8,499	1,333	44	89	1,204
Selangor	16,521	9,402	13,760	4,488	759	21	7	683
Negri Sembilan	16,808	5,028	7,581	5,243	1,047	76	42	649
Malacca	7,493	2,280	5,399	2,112	437	22	4	130
Johore	19,984	3,622	6,264	9,566	1,010	36	29	724
Kelantan	4,107	1,225	2,798	1,710	420	3	2	217
Trengganu	4,710	673	2,899	1,371	428	20	3	350
Pahang	12,801	4,483	3,835	5,816	1,042	—	—	366
Public Health Nurses (Dental) Training School	8,087	3,346	332	4,624	121	—	—	497
Total	156,350	49,980	75,652	54,032	9,221	403	205	7,659

TABLE 9.

MICROSCOPICAL EXAMINATION OF BLOOD FILMS FOR THE YEAR 1950.

State or Settlement.	Number of patients examined.	Number Positive for Malarial Parasites				Total number of examinations of blood films.
		S.T.	B.T.	Quartan.	Mixed infection.	
Kedah	9,479	720	474	15	10	10,943
Perlis..	7,100	784	937	8	—	7,183
Penang & Province Wellesley	16,886	467	334	15	6	19,327
Perak	36,374	1,611	708	29	23	76,226
Selangor	29,014	336	221	56	24	50,247
Negri Sembilan ..	14,445	740	90	14	18	27,609
Malacca	11,133	1,496	122	10	2	12,186
Johore	21,896	642	404	12	191	25,409
Kelantan	*	658	464	61	7	9,980
Trengganu	2,542	185	134	19	13	2,893
Pahang	25,885	423	124	4	3	34,683
Total ..	174,754	8,062	4,012	243	297	276,686

* Figures not available.

TABLE 10.

MICROSCOPICAL EXAMINATION OF FAECES FOR WORM INFECTIONS FOR 1950.

State or Settlement.	Number of patients examined.	Number positive for entamoeba histolytica.	Number Positive for Ova.			Total number of examinations.
			Ascaris lumbricoides.	Ankylostoma duodenale.	Mixed infection.	
Kedah	9,468	200	3,833	1,674	643	10,195
Perlis..	1,550	44	728	19	90	1,604
Penang & Province Wellesley	14,773	343	3,738	2,669	1,336	19,013
Perak	32,468	281	6,507	2,679	905	41,583
Selangor	24,650	102	7,076	3,074	1,320	35,461
Negri Sembilan ..	11,354	60	1,860	955	232	19,152
Malacca	6,574	79	679	941	2,870	7,631
Johore	16,761	148	5,575	2,491	1,854	20,051
Kelantan	*	81	1,867	195	963	6,462
Trengganu	1,764	109	281	102	471	2,727
Pahang	16,761	72	3,502	313	427	23,009
Total ..	136,123	1,519	35,646	15,112	11,111	186,888

* Figures not available.

TABLE 11.

POST MORTEM EXAMINATIONS, 1950.

State or Settlement.	Medico-legal.	Clinical.
Kedah	203	—
Perlis	32	2
Penang and Province Wellesley	214	17
Perak	806	122
Selangor	573	55
Negri Sembilan	127	2
Malacca	113	28
Johore	552	27
Kelantan	62	4
Trengganu	20	2
Pahang	348	54
Total	3,050	313

TABLE 12.

RETURN OF VENEREAL DISEASES FOR THE YEAR 1950.

A.—NEW CASES.

Nationalities.		Syphilis.				Gon-orrhoea.	Chan-croid.	Lympho-gran.	Comb. infec.	Non-venrl.	Total.	
		Prim.	Sec.	Tert.	Congen.						M.	F.
Chinese	M.	264	1,452	276	66	1,467	643	57	47	770	5,042	—
	F.	52	793	250	156	358	9	—	75	1,382	—	3,075
Indians	M.	201	1,275	139	37	1,056	643	67	58	738	4,214	—
	F.	51	582	138	76	135	10	1	12	703	—	1,708
Malays	M.	373	1,529	249	37	1,542	162	85	39	347	4,363	—
	F.	87	532	222	75	325	8	10	41	584	—	1,884
Europeans	M.	15	17	—	—	124	16	—	3	22	197	—
	F.	—	—	—	—	1	—	—	—	4	—	5
Others	M.	3	41	15	1	47	8	1	1	16	133	—
	F.	2	38	4	—	24	—	—	6	45	—	119
Total	M.	856	4,314	679	141	4,236	1,472	210	148	1,893	13,949	—
	F.	192	1,945	614	307	843	27	11	134	2,718	—	6,791
											GRAND TOTAL ..	20,740

TABLE 12—(*cont.*).

RETURN OF VENEREAL DISEASES FOR THE YEAR 1950—(*cont.*).

B.—RE-ATTENDANCES.

Nationalities.		Syphilis.				Gon-orrhoea.	Chan-croid.	Lympho-gran.	Comb. infec.	Non-venrl.	Total.	
		Prim.	Sec.	Tert.	Congen.						M.	F.
Chinese	M.	2,390	15,439	2,254	562	3,953	3,058	145	875	648	29,324	—
	F.	255	13,571	2,479	1,887	1,374	14	—	481	3,965	—	24,026
Indians	M.	2,076	13,570	1,043	198	3,327	2,579	209	1,203	731	24,936	—
	F.	189	7,436	963	819	313	24	2	116	2,190	—	12,052
Malays	M.	2,087	22,673	2,539	327	2,771	585	146	461	675	32,264	—
	F.	272	6,489	1,578	557	476	5	9	268	1,984	—	11,638
Europeans	M.	55	109	9	—	243	50	—	3	21	490	—
	F.	—	—	6	—	3	—	—	—	—	—	9
Others	M.	44	541	66	4	97	17	4	5	12	790	—
	F.	19	671	20	17	81	—	—	80	52	—	940
Total	M.	6,652	52,332	5,911	1,091	10,391	6,289	504	2,547	2,087	87,804	—
	F.	735	28,167	5,046	3,280	2,247	43	11	945	8,191	—	48,665
											GRAND TOTAL ..	136,469

TABLE 12—(*cont.*).

RETURN OF VENEREAL DISEASES FOR THE YEAR 1950—(*cont.*).

C.—ANALYSIS OF COMBINED INFECTIONS—NEW CASES ONLY.

	CHINESE.		INDIANS.		MALAYS.		EUROPEANS.		OTHERS.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
With Syphilis	34	75	53	12	37	41	2	—	1	6	127	134
With Gonorrhoea ..	42	75	42	12	25	41	3	—	—	6	112	134
With Chancroid ..	17	—	16	—	11	—	1	—	1	—	46	—
With Lymphogranuloma	1	—	5	—	5	—	—	—	—	—	11	—

TABLE 13.

SUMMARY OF CHILD WELFARE CENTRES.

States/Settlements.	Permanent Centres.	Subsidiary Centres.	MEDICAL OFFICERS.		Health Sisters.	Health Nurses.	Dispensers or Hospital Assistants.	Midwives.
			Women.	Men.				
Kedah	3	25	—	—	1	4	—	2
Perlis	1	—	—	—	—	1	—	4
Penang and P. Wellesley ..	11	8	—	—	2	13	2	18
Perak..	6	8	1	—	7	21	—	—
Selangor	7	5	1 (P.T.)	—	4	17	3	4
Negri Sembilan	6	1	1 (P.T.)	—	6	4	2 (P.T.)	4
Malacca	7	4	1	—	1	7	1	6
Johore	6	23	2	3 (P.T.)	6 (1 P.T.)	10	4	22
Kelantan	1	5	—	—	1	1	—	1
Trengganu	2	9	—	—	1	1	—	2
Pahang	7	—	—	—	3	5	—	3
Total ..	57	88	6	3	32	84	12	66

(P.T.) = Part Time.

Table 14.

SUMMARY OF DISPENSARIES.

(Excluding Hospital Out-Patient Dispensaries.)

State/Settlement.	Total number.	Fixed.	Travelling.		Medical Officers.	Health Sisters.	Health Nurses.	Dispensers or Hospital Assistants.	Midwives.	Others.
			Road.	River.						
Kedah	20	13	7	—	—	—	—	18	—	—
Perlis	6	5	1	—	1 (P.T.)	—	—	6	—	—
Penang and P. Wellesley ..	10	7	3	—	2	—	—	9	—	2
Perak	32	22	7	3	—	—	—	30	—	—
Selangor	17	12	5	—	—	—	—	17	—	—
Negri Sembilan	12	6	6	—	2	—	—	12	—	—
Malacca	6	4	2	—	1 (P.T.)	—	—	8	—	—
Johore	32	17	12	3	7 (6 P.T.)	—	—	31	—	1
Kelantan	17	6	9	2	—	1	1	10	1	—
Trengganu	11	6	4	1	—	—	—	12	—	1
Pahang	22	9	7	6	1	—	—	14	—	—
Total ..	185	107	63	15	14	1	1	167	1	4

(P.T.) = Part Time.

TABLE 15.

ESTABLISHMENT—MEDICAL DEPARTMENT, 1st JANUARY, 1951.

(F) = Federal. (S) = State or Settlement.

MEDICAL.

SUPERSCALE POSTS (67)—

The superscale posts include three higher administrative posts. The remaining superscale posts number 64, and not more than 33 of them will normally be filled by officers recruited by the Secretary of State.

Director, Medical Services	(F)	1
Deputy Director, Medical Services	(F)	1
Director, Institute for Medical Research	(F)	1

ADMINISTRATIVE OFFICERS, GRADE "A" (10)—

Assistant Director, Medical Services	(F)	
Chief Medical Officer, Penang	(S)	
State Medical and Health Officer, Perak	(S)	
,, ,, Selangor	(S)	
,, ,, Negri Sembilan	(S)	
,, ,, Pahang	(S)	
Principal Medical Officer, Johore	(S)	
State Surgeon, Kedah	(S)	
Chief Medical Officer, Malacca	(S)	
,, ,, Kelantan	(S)	

ADMINISTRATIVE OFFICERS, GRADE "B" (10)—

Deputy State Medical and Health Officer, Perak	(S)	
Deputy State Medical and Health Officer, Selangor	(S)	
Deputy State Surgeon, Kedah	(S)	
Deputy Principal Medical Officer, Johore	(S)	
Deputy Chief Medical Officer, Penang	(F)	
Chief Medical Officer, Trengganu	(S)	
Senior Health Officer, Malacca	(S)	
Senior Health Officer, Penang	(S)	*
Senior Health Officer, Perak	(S)	*
Senior Health Officer, Kelantan	(S)	*

SPECIALIST OFFICERS, GRADE "A" (3)—

Surgeon, Selangor	(S)	†
Ophthalmologist, Selangor	(S)	†
Radiologist, Selangor	(S)	†

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* New post. † Upgraded from Grade "B".

TABLE 15—(*cont.*)

SPECIALIST OFFICERS, GRADE "B" (41)—		
Senior Research Officers (4)—		
Senior Bacteriologist	(F)	
,, Pathologist	(F)	
,, Nutritional Research Officer	(F)	
,, Malaria Research Officer	(F)	
Physicians (7)—		
Physician (Dermatology and V.D.)	(F)	†
,, Johore	(S)	
,, Penang	(F)	
,, Selangor	(S)	
,, Perak	(S)	
Physician and Radiologist, Kedah	(S)	
Physician, Negri Sembilan	(S)	*
Surgeons (9)—		
Surgeon, Johore	(S)	
,, Negri Sembilan	(S)	
,, Penang	(F)	
,, Perak	(S)	
,, Selangor	(S)	
,, Pahang	(S)	
,, Kelantan	(S)	
,, Kedah	(S)	
,, Malacca	(S)	
Ophthalmologists (4)—		
Ophthalmologist, Penang	(F)	
,, Kedah	(S)	
,, Johore	(S)	
Ophthalmologist, Perak	(S)	*
Obstetricians (3)—		
Obstetrician, Penang	(F)	
,, Perak	(S)	
,, Johore	(S)	
Senior Pathologists (2)—		
Senior Pathologist, Penang	(F)	
,, ,, Johore	(S)	
Tuberculosis Specialists (2)—		
Tuberculosis Specialist, Federal	(F)	
,, ,, Perak	(S)	
Radiologists (3)—		
Radiologist, Negri Sembilan	(S)	*
,, *Perak*	(S)	*
,, *Penang*	(F)	*
Ear, Nose and Throat Specialist (1)—		
Ear, Nose and Throat Specialist, Perak	(S)	*

* New post. † Change of title from V.D. Specialist.

TABLE 15—(*cont.*)

Anæsthetists (2)—
Anæsthetist, Johore ... ... (S) *
,, *Selangor* ... ... (S) *
Medical Superintendent, Leper Settlement (1) ... (F)
,, ,, Mental Hospital (1) ... (F)
,, ,, General Hospital, Johore (1) ... ... (S)
Child Health Specialist (1) ... ... (F)

TIMESCALE POSTS (MEDICAL) (241)—

(Of the 241 timescale Medical Officers, the number of expatriate officers recruited by the Secretary of State will not exceed 83. The remaining posts will be filled by officers recruited in Malaya).

The duty posts for Medical Officers on the timescale include Health and Research Officers. The allocation of posts is approximately—

	Men.	Women.
Medical Officers	171	22
Health Officers	32	8
Research Officers	8	—
	211	30=241

Research Students 2
House Surgeons 20

DENTAL.

Superscale Grade "A" 1
Chief Dental Officer (F) †

Superscale Grade "B" (2)
Specialist Officer (*Dental*) (F) 1*
Specialist Officer (*Dental*), *Johore* (S) 1*

Timescale Posts (Dental) 39
(Of these, Dental Officers recruited by the Secretary of State will not exceed 4)

House Surgeons (Dental) 8

RESEARCH OFFICERS (Non-Medical).

(All these officers are now recruited by the Secretary of State).

Research Officers (non-medical) (5)
Chief Biochemist (F) Superscale Grade "B" 1
Biochemists 2
Entomologists 2

PHARMACEUTICAL.

(Three recruited by the Secretary of State).

Chief Pharmaceutical Chemist (F) Superscale Grade "B" 1
Superintending Pharmaceutical Chemists and Pharmacists 3

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* New post. † Upgraded from Grade "B".

TABLE 15—(*cont.*)

NURSING.

(In the group of Matrons, Nursing Sisters and Health Sisters, Expatriate Officers recruited by the Secretary of State will not exceed 115).

Principal Matron	1
Matron, Grade I	7
Matrons, Grade II	14
Sister Tutors	10
Sister Tutors (Dental)	1
Nursing Sisters	118
Health Sisters	35
Total ...	186

Other appointments which may be filled by recruitment by the Secretary of State.

Women Almoners	2
,, Dietitians	1
,, Radiographers	3
,, Physiotherapists	4
Total ...	10

Men: Superintendent, Orthopaedic Centre ...	1
Senior Male Nurses, Mental Hospital	2
Male Nurse, Mental Hospital	1
Total ...	4

The foregoing statement covers duty posts only, and makes no provision for leave reserves.

Trained Hospital and Public Health Staff.

(The following groups are all recruited in Malaya):

Lay Superintendents (Leper and Tuberculosis Settlements)	2
Chief Sanitary Inspectors	3
Field Nutrition Officer	1
Pharmacists	8
Radiographers (Hospital Assistants) ...	3
Health and Sanitary Inspectors	137
Laboratory Assistants	69
Dental Mechanics	18
Hospital Assistants	1,160
Stewards	1
Nurses: Public Health	106
Hospital	1,115
Midwives	317

Hospital Servants, Ambulance Drivers and other employees in the Medical Department, Federal, State and Settlement 2,993

(This does not include servants paid from "Open Votes" and labourers on daily rates of pay).

TABLE 15—(*cont.*)

DETAILS OF STAFFING AS AT 1st JANUARY, 1951.

Establishment.		Substantive holder in post.	Substantive holder on leave.	Temporary.	Post vacant.
SUPERSCALE MEDICAL ..	67				27
Asians—					
Men		11	1	—	—
Women		—	—	—	—
Europeans—					
Men		28	6	—	—
Women		1	—	—	—
		40	7	—	27
TIMESCALE MEDICAL OFFICERS	241				101
Asians—					
Men		70	14	27	—
Women		3	—	6	—
Europeans—					
Men		26	8	1	—
Women		2	1	5	—
Leave Reserve	30	101	23	39	101
Research Students ..	2				2
House Surgeons	20				4
Asians—					
Men		12	—	—	—
Women		4	—	—	—
SUPERSCALE DENTAL ..	3				2
European (Man)—		1	—	—	—
TIMESCALE DENTAL OFFICERS	39				12
Asians—					
Men		21	2	1	—
Women		—	—	2	—
Europeans—					
Men		1	—	—	—
Women		—	—	2	—
Leave Reserve	2	22	2	5	12
House Surgeons	8				1
Asians—					
Men		6	—	—	—
Women		1	—	—	—
RESEARCH OFFICERS (NON-MEDICAL):					
Superscale	1				1
European (Man)		—	1	—	—
Timescale	4				
European—					
Men		2	1	—	1
Women		1	—	—	—
Leave Reserve	2	3	2	—	2
PHARMACEUTICAL:					
Superscale	1				
European—					
(Man)		1	—	—	—
Timescale	3				
Asian—					
(Man)		1	—	—	—
European—					
(Man)		1	1	—	1
NURSING:					
Principal Matron, Matrons, Grade I and II ..	22				6
European Women		16	3	—	—
Sister Tutors	11				8
European Women		2	1	1	—
Nursing Sisters	118				15
Asian Women		29	8	4	—
European Women		52	6	18	—
Health Sisters	35				17
Asian Women		—	—	—	—
European Women		14	1	4	—
Leave Reserve	19	113	19	27	46

Table 15—(*cont.*)

DETAILS OF STAFFING AS AT 1st JANUARY, 1951—(*cont.*)

Establishment.		Substantive holder in post.	Substantive holder on leave.	Temporary.	Post vacant.
Other Appointments :					
Almoners	2	1	—	—	1
Dietitians	1	—	1	—	1
Radiographers	3	1	—	—	2
Physiotherapists (All European Women)	4	2	—	1	1
Superintendent, Orthopaedic Centre	1				
(European Man)		1	—	—	—
Mental Hospital :					
Senior Male Nurses	2				
Europeans		1	1	—	1
Male Nurse	1				
Asian		1	—	—	—

Figures for leave reserve shown above are arbitrary, being equal to the number of officers on furlough or study leave overseas.

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